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THE  
SIEGE OPERATIONS  
IN THE  
CAMPAIGN AGAINST FRANCE,  
1870-71.

BY  
B. VON TIEDEMANN,  
COLONEL IN THE ROYAL PRUSSIAN ENGINEERS.

TRANSLATED BY  
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WITH NINETEEN LITHOGRAPHED PLANS.



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## PREFACE.

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THE campaign of 1870-71, taken in conjunction with that of 1866, will mark a new epoch in military history and the art of war, and will long afford thoughtful soldiers inexhaustible materials for study of every description.

The war of 1866 was followed by re-organisation and re-arming in most of the countries of Europe, and similarly that of 1870-71 will lead to reforms, among which those in the art of fortification will undoubtedly take a prominent place.

The first regular siege of a fortress of the highest order since the introduction of rifled ordnance, the blockade of the strongest place in the world with an army for its garrison, and the successful operations before the enemy's capital, containing 2,000,000 inhabitants, as well as those against the other strongholds of France, which occupied the German armies for four months after the Battle of Sedan, are all events of the highest interest, not only for the artilleryman and engineer, but for every officer, and even for the general public.

These pages are supplementary to the many general accounts of the campaign, as they deal exclusively with the siege operations of 1870-71. The author does not at present attempt to put forth a thorough critical examination of those important events, but he wishes to supply a clear account of the particulars of the various sieges, and of the larger sorties, and thus to contribute a chapter to the history of the great war. With this object all available authorities have been carefully collected, sifted, and, where necessary, supplemented, so that it is hoped a complete sketch, in outline, of the siege operations may be offered to the reader. Although this work contains the more important particulars, further details must be looked for in subsequent publications, at a time when it will be more easily supplied.



It is impossible to write a complete and perfectly accurate history of the sieges so soon after the war ; this can alone be done by the authorities some time hence, when all the official reports from the various arms of the service are available. The Siege of Sebastopol was only described for some time by ordinary books and maps, and the same will be the case with that of Paris, which affords, beyond all comparison, more copious matter. The Author is perfectly aware of the deficiencies of his work in many respects, both in the letterpress and in the plans ; but he hopes for indulgence from the reader, and also from the critic, to both of whom the difficulty of a work of this kind must be known.

The accompanying Plates will, it is hoped, prove sufficient to explain and supplement the description of the sieges.

THE AUTHOR.

Dresden, October 1871.

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## SUMMARY OF SIEGES.

THE  
SIEGE OPERATIONS  
IN THE  
CAMPAIGN AGAINST FRANCE, 1870—1871.

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INTRODUCTION.

In few great wars has the influence of fortifications on military operations been displayed in so striking a manner as in the recent campaign. It is, therefore, of special interest to take a preliminary glance at the systems of defence which had been organised in the countries concerned.

This remark has reference particularly to the advance of the opposing armies on Berlin and Paris respectively; for Berlin was the objective point of the French, in case the fortune of war had been favourable to them on the Rhine.

In Prussia we find that from the western frontier to the capital of the country the lines of the rivers and the most important passages over them, as well as the junctions of the high-roads and railways, are protected by fortresses of suitable strength, which not only cover the communications at these points, but also secure the provincial capitals and the military depôts against the attack of an enemy. They are generally of such strategic importance and so strong in themselves, that they could not be neglected in any operations of a systematic and deliberate nature. Besides fortresses on the lines of the Rhine and the Elbe, the country is protected by an appropriate and sufficient number in advanced and intermediate positions, which would serve as bases and points of support to an army acting on the defensive in this quarter. We believe it may be assumed that a project for fortifying Berlin—though, perhaps, only in a temporary manner—exists, and is so far completed, that its execution

could be effected in a very short time. As far as the means at the disposal of the government permit, the fortresses of Prussia are maintained in excellent condition, and ready for war.

In France we find a very different state of affairs. On the northern and eastern frontiers lies a threefold girdle of fortresses of all classes, erected for the most part by Louis XIV., ostensibly as a bar to German invasions. We must bear in mind, however, in criticising with our present views this system of land defences, that the regular siege played a far greater part in war formerly than at the present day. Most of the fortresses, both large and small, in that part of the country were originally built, or converted from older works to their present form, by Vauban, Chamilly, and Cormontaigne.

It was on account of the slowness of the movements of the armies of that period, and the wretched state of the country topographically, that the fortresses were erected in places that are now of no military value; for this war has taught us that the advance of the German armies, by the roads and railways now existing, was not delayed by them. As railways form now the chief lines of operations of armies, a sweeping reduction in the number of the small frontier fortresses should long since have been undertaken in France, and there would then have been no occasion for the parsimony that has been shown in the cost of their maintenance, in their garrisons, and even in their armaments and supplies of ammunition. Moreover, the French, so long ago as 1814-15, had the best of lessons, especially with regard to the numerous small fortresses of the northern frontier, but to this day they have not profited by it. Consequently, of the fortresses in Alsace and Lorraine, only the possession of Strasburg and Metz has for us a decided, and that of Bitsch and Pfalzburg a subordinate interest. Finally, we may observe that, in spite of these circumstances, it is not unlikely that the small fortresses, being there, will be maintained for some years, because they may be useful as points of support in the conquered country of Lorraine. Independent of this expense, Lorraine and Alsace will at first cost us more than they will bring in.

With the fortresses of Lorraine once in our hands, the whole country as far as Paris lies open. We see that, as regards places to bar the communications by road, railway, or canal, Toul and, perhaps, also Vitry were the only important points, since they secure the line of railway leading from Metz and Strasburg, by Nancy, to Paris. The advance to Paris would have been a very different matter for the German armies if Chalons and Soissons, Rheims and Troyes, had been fortresses of suitable strength and size, and had prevented us from marching straight on the capital.

Paris was a fortress from an early date down to the reign of Louis XIV. In course of time it was repeatedly enlarged. Louis XIV. caused the fortifications to be demolished, in order to improve and enlarge the town, not without the opposition of Marshal Vauban, who wrote a memorandum on the fortification of Paris, but without result. Again, under Napoleon, suggestions were made

for the fortification of Paris, put forward apparently by Marshal Soult; but the idea was not carried into execution. Thus the Allies, in 1814-15, found it an open town, with nothing round it but barricades and some slight works at the barriers and on Montmartre, so that it was easily taken, after some sanguinary engagements, which took place chiefly round the well-known plateau of Romainville, and round Montmartre, then lying without the town.

Five-and-twenty years later the then premier (Thiers) succeeded in fortifying the capital of the country, at a cost of 140 millions of francs, according to a project proposed—so far as we are aware—by General Dode de la Brunerie. The veteran diplomatist Thiers, a Frenchman to the backbone, has now, after having met with great opposition to his scheme of fortifying Paris, the satisfaction of having seen an army of 250,000 men arrested before the capital in their triumphal march, as he, with full knowledge of the internal condition of France, had prophesied before the outbreak of the war.

Had Paris not been a fortress, France would have been, in all probability, compelled to make peace after the events of Sedan, because, quite independently of the moral impression which the news of the march of the Germans on the capital of the country could not fail to produce, the government, sprung from the revolution of September, would not have had the time requisite for the creation of new armies in Paris, in the South and in the North of the country, for the acquisition of new matériel, and for the organisation of a popular war in some of the provinces. Without fortifications, Paris could not have defended itself on the 18th March, 1871, and it was a strange stroke of destiny that the builder of the works should stay so long before them without becoming their master.

The French declaration of war, made on the most frivolous grounds in July, 1870, found the German fortresses of the Rhine—Saarlouis, Gernersheim, Rastatt, Mainz, Coblenz, Cologne, and Wesel—on a peace footing. Thanks to the admirable system of readiness for war in the German army, and to the regulations made for this purpose, these fortresses were put into a complete state of defence to resist a sudden attack, with regard both to their works and their armaments, before the end of the first fortnight. Had the French army pressed on before this time, it would, at the worst, have interfered no more with the preparation of the fortresses than with the mobilisation of the army. There must have been some important reasons why the French, after completing their concentration in all essentials so early as the 16th July, did not seize the opportunity to attack Saarlouis and Rastatt, which lay so close to them.

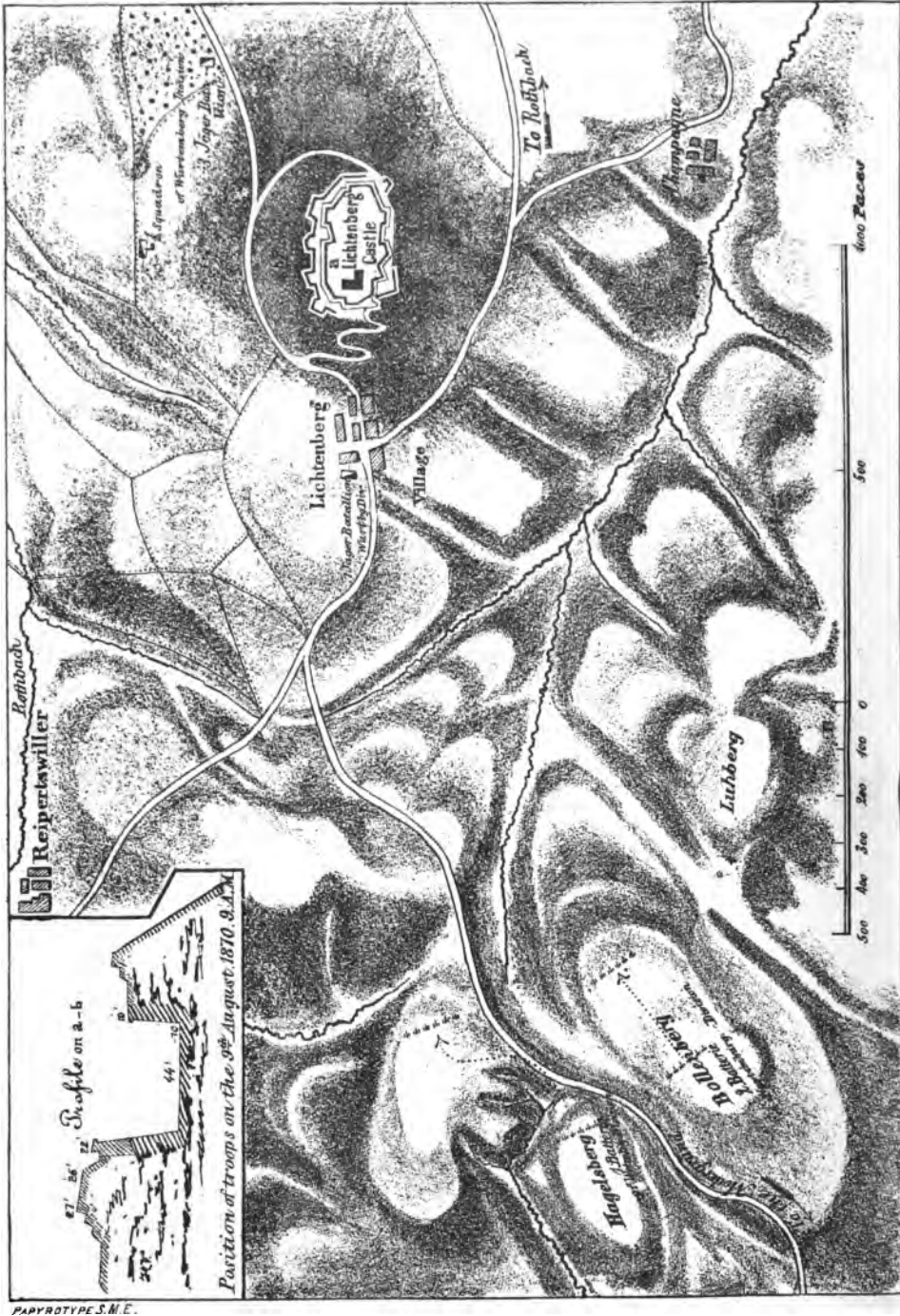
On the side of the French, at the outbreak of the war, the fortresses of Strasburg, Breisach, Schlettstadt, Belfort, Lützelstein (La Petite Pierre), Lichtenberg, Pfalzburg, Bitsch, Marsal, Metz, Toul, Thionville, Longwy, Montmedy, Mézières, and Sedan were declared in a state of siege, and put into a condition for defence, which last, with the French, corresponds to our 'Armierung' (pre-

paration of works and armaments). But in France, during peace, with few exceptions, little or nothing is done to prepare the fortresses for the transition from a condition of peace to one of war, so that the armaments and works of the places there were not ready beforehand; thus it came to pass that, wherever our advanced guards appeared, they found the preparations for a state of siege incomplete, and interrupted them.

Never yet has so rich a field for practical and professional training presented itself to the German siege artillery and to the German engineers as in the late war. They had to contend against adversaries, who, firm and unshaken in the traditions of their famous engineers and artillerymen, imagined that they far excelled all other nations in fortification and in gunnery, and had often declared their superiority, both verbally and in writing. Our success against the French fortresses has now proved, clearly and unanswerably, the superiority of the German scientific arms. The armaments of the French fortresses may be said to have been everywhere ample; but they had omitted to strengthen and extend the fortifications by the addition of detached forts, which would have kept at a distance the enemy's long-range artillery, and the defence was thus at a disadvantage. Only Metz, Paris, and Belfort were provided with such forts, and these fully answered the purpose for which they were intended.

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## LICHTENBERG.

(PLATE I.)

THE strong mountain castle of Lichtenberg is situated at the entrance to the Vosges, on an isolated conical hill overtopping the table-land around it by about 100 feet. It consists of an enceinte, revetted to a height of 30 to 35 feet, with a ditch and masonry counterscarp.

The escarp is broken, so as to flank the ditch, and is in some places provided with machicoulis, by which fire can be directed on the foot of the wall. Inside the fort is a bombproof keep, which, with a few casemates, is the only accommodation for the garrison. The gateway on the west side is blasted out of the rock, and is protected by a ravelin in front.

The fort bars the road, which leads from Buchweiler by Ingweiler to Lemberg. It lies at one side of, and about three-quarters of a mile (three-and-a-half miles English) north of the road between the valleys of the Moder and the Rothbach: its influence on the road is dependent on the strength of the troops available for offensive action from the fort.

The order for the capture of the stronghold of Lichtenberg reached Major-General Von Obernitz, of the Prussian army, attached to and commanding the Würtemberg division, on the evening of the 8th August. With this object a detachment, consisting of the 1st and 3rd jäger battalions, two batteries, half a squadron of the 4th cavalry regiment, and a detachment of pioneers (engineers), under the command of General Von Hügel, started from their bivouac near Rothbach and Ingweiler early on the 9th August, and reached the fortress about half-past 7 o'clock in the morning.

The village of Lichtenberg, which was weakly occupied, was surrendered by the French on the approach of the detachment. Captain Schill was sent, with a flag of truce, to the fortress to demand its surrender; he returned, however, without any result, after having been fired at. Upon this the 1st jäger battalion took up a position in the town of Lichtenberg west of the fort, the 3rd in the wood to the east of it; the cavalry maintained the communication between the two on the north side. The artillery came into action at first at 2,000 paces, and afterwards at 1,700 paces, to the eastward of the road leading from the Moder valley to Lichtenberg; later on they advanced about 500 paces.

The fire of these two batteries, assisted by the musketry of the two jäger battalions, was answered by shells and musketry from the fort, without any important result being attained on either

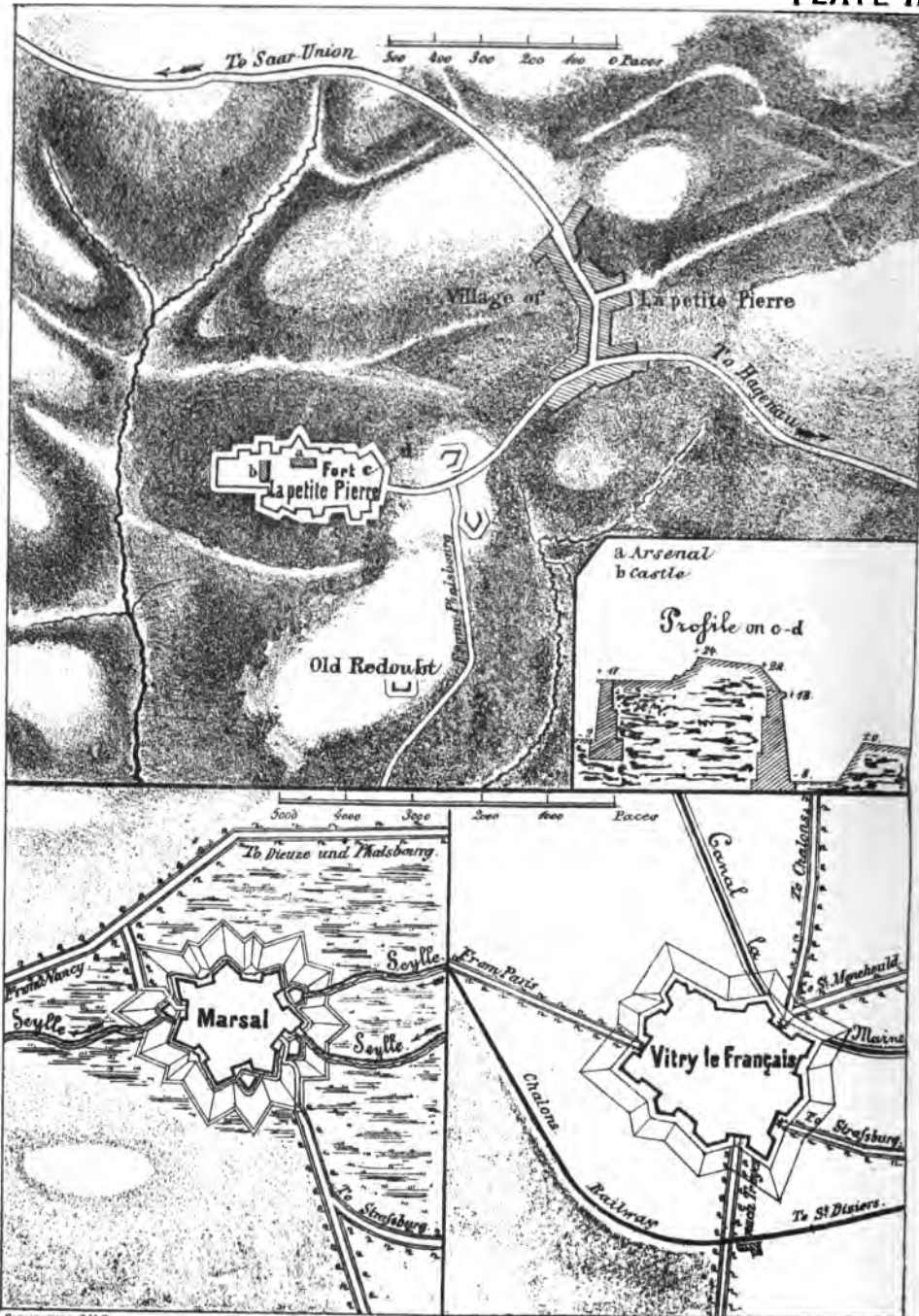
side. About 11 a.m. a reinforcement of a third battery arrived, and took up a position on the left of the batteries already in action. Some of the guns in the fort were dismounted; here and there flames were seen in the work.

The fort was summoned to surrender, but without success; contrary to the custom of war, the flag of truce was fired upon. The engagement began afresh after the arrival of two more infantry companies, who took their share in the musketry fight of the jäger battalions; single skirmishers advanced right up to the glacis; the pioneers burst through the barrier of the palisades there. As the principal gateway was covered, and could not be shelled by the artillery, and the destruction of the buildings did not seem sufficiently extensive to justify an assault, the fire upon the work was stopped late in the afternoon, and the detachment began to march back, leaving before the fort the half-squadron of cavalry and the 1st jäger battalion. These troops were to take up a position for the observation of the fortress. Suddenly the roof of one of the principal buildings in the work took fire, and this induced General Von Hügel to order the 6th battery, which had already marched off, to recommence fire; it returned, and cannonaded the fort most effectively, at 1,700 paces, until 7 o'clock in the evening. The damage effected in the work increased visibly, and the Commandant (Second-Lieutenant Arcuer) was, therefore, induced to capitulate, about 10 o'clock in the evening.

The fort was taken over on the following morning, about 8 o'clock, by the 1st jäger battalion, left behind under the command of Lieutenant-Colonel Steiger; while the rest of the detachment got back, on the 12th August, to the division, which had in the meantime advanced to Rauweiler. The artillery had fired about 1,300 rounds against the fort. The garrison (consisting of three officers and 280 men, including 27 wounded and 10 killed) comprised 24 men of the 96th line regiment, 6 gunners of the 5th regiment of artillery, and 240 fugitives from the battle of Wörth. It seems, therefore, as if the fort had not from the first been supplied with its war garrison. The war-matériel captured consisted of 4 guns, 3 howitzers, 204 chassepot rifles, quantities of gun and musket ammunition, and other artillery and engineer stores, as well as provisions of every kind.

The officers were allowed to retain their swords for a time, and received their private property. The rest of the garrison were at once sent away as prisoners of war. The capitulation was concluded by Major Seestorf, commanding the 1st Württemberg jäger battalion, and approved on the 11th August by His Royal Highness the Crown Prince of Prussia, as Commander-in-Chief of the IIIrd army.





## LÜTZELSTEIN.

(PLATE II.)

THE little fort of Lützelstein (La Petite Pierre) bars the high-road which leads diagonally over the mountains from Hagenau to the Saar, as well as the road on the ridge from Bitsch to Pfalzburg. The roads of the Vosges here, and we may add generally, are kept in very good order, and fit for the passage of troops of all arms.

The fort of Lützelstein has an escarp 26 feet high, which by its broken trace provides for the flanking of the ditch. The counterscarp is of earth. The outworks on the west and south sides are almost in ruins. The castle in the interior of the fort, constructed in the style of the middle ages, serves as a defensible barrack, and may, with some alterations to the buildings, be made use of as a keep.

Lützelstein was abandoned by the enemy and fell into our hands on the 9th August, and with it some guns, magazines, and warlike stores. The capture of the fort was a result of the victories of Weissenburg, Wörth, and Saarbrücken, in consequence of which the French entirely evacuated the country from the frontier to the Vosges. The defence of the passes of the Vosges to the death, which they had previously spoken of, was therefore but an empty boast.

The fort was surrendered, with its garrison of half a company of the 96th regiment of infantry, to a Würtemberg company.

Apparently the garrison was taken by surprise at the rapid advance of the German columns. On its occupation there were found half-finished palisades, and great masses of squared stones, which must have been prepared for building, but had not been used. General De Failly, who inspected the place on Sunday the 7th August, after the Battle of Wörth, left behind him the most distinct orders for its vigorous defence. A great part of the arms and ammunition were found buried, as well as some officers' baggage.

His Royal Highness the Commander-in-Chief of the IIIrd army, the Crown Prince Frederick William of Prussia, inspected the fort, in the course of his march with the headquarters, on the 10th August.

## MARSAL.

(PLATE II.)

THE fort of Marsal commands the valley of the Seylle, near the important road-junctions at Château-Salins and Moyenvic, where the main roads—Metz to Strashurg, Saargemünd to Nancy, and Saarlouis to Luneville—cross one another after being joined by numerous branches. The ground in the direction of Metz forms an excellent defensive position if the defence of the North-east of France is in question, but in the hasty retreat of the French to the line of the Moselle this advantage was not made use of.

The fortress has about 1,200 inhabitants, and consists of seven bastioned fronts, of which those commanding the chief roads, and through which the latter enter the fortress, are provided with ravelins. The ditches are supplied from the Seylle, and have masonry escarps but no flanking defences in them; nevertheless the place must be considered as secure from assault, and much must in recent times have been done to strengthen it. The ground in front of the fort—which lies very low, and is intersected by several channels of the Seylle—is marshy, and thus very ill-adapted for the advance of troops.

The 4th Bavarian division, under the command of Lieutenant-General Von Bothmer, commenced their march by Lützelstein on the evening of the 14th August. While on the road on the heights of Mécleuves, the order arrived to advance by a forced march immediately through Marsal to Luneville, in order to cover the left flank.

The 4th Prussian cavalry division had already arrived before Marsal on the 13th of August. They bombarded the town and demanded its surrender without success; in the evening the division was relieved by three battalions and a regiment of light cavalry belonging to the advanced guard of the II<sup>nd</sup> Bavarian corps.

On the 14th of August the ulan brigade, a detachment of reserve artillery, and two companies of engineers, marched for Marsal. The heights surrounding the fortress on the north and south offer good commanding positions; they were each occupied by a regiment of ulans and three or four batteries. All the preparations for a vigorous bombardment were completed; a signal gun was to give the time for opening fire. The officer commanding the corps, Lieut.-General von Hartmann, sent a written demand for the surrender of the place; during the negotiations, which lasted an hour, a shot was fired from the fortress, and a Bavarian battery also fired 21 rounds prematurely; the firing was not, how-

ever, without its influence on the commandant, who capitulated. Sixteen officers and several hundred men forming the garrison became prisoners of war, whilst 61 guns and considerable supplies of all kinds fell into the hands of the Bavarian troops.

With the fall of Marsal the road through Dieuze to Nancy became open, and the communications with the Rhenish Palatinate were established. The war indemnity for the fortress of Marsal amounted to 35,957 francs.



## VITRY.

(PLATE II.)

VITRY, on the Marne, lies between the canal of La Marne and the railroad from St. Dizier to Chalons, and is astride of the main road from Strasburg to Paris. The town is 300 years old, and was founded by Francis I., on which account it is called 'Vitry le Français'; its military importance results from the situation, which gives it the command of a main road.

The fortifications of Vitry consist of nine irregular bastions. There are no casemates, outworks, or detached forts: the profile of the works and the flank defences are such that the place must, nevertheless, be considered proof against assault.

The preparations for a siege were very scanty, as regarded both works and armaments. The entrance-gates were merely barricaded in such a manner as the hourly expected approach of the enemy rendered absolutely requisite. A railway-bridge 100 feet long, lying within range of the guns of the fort, had, however, been blown up.

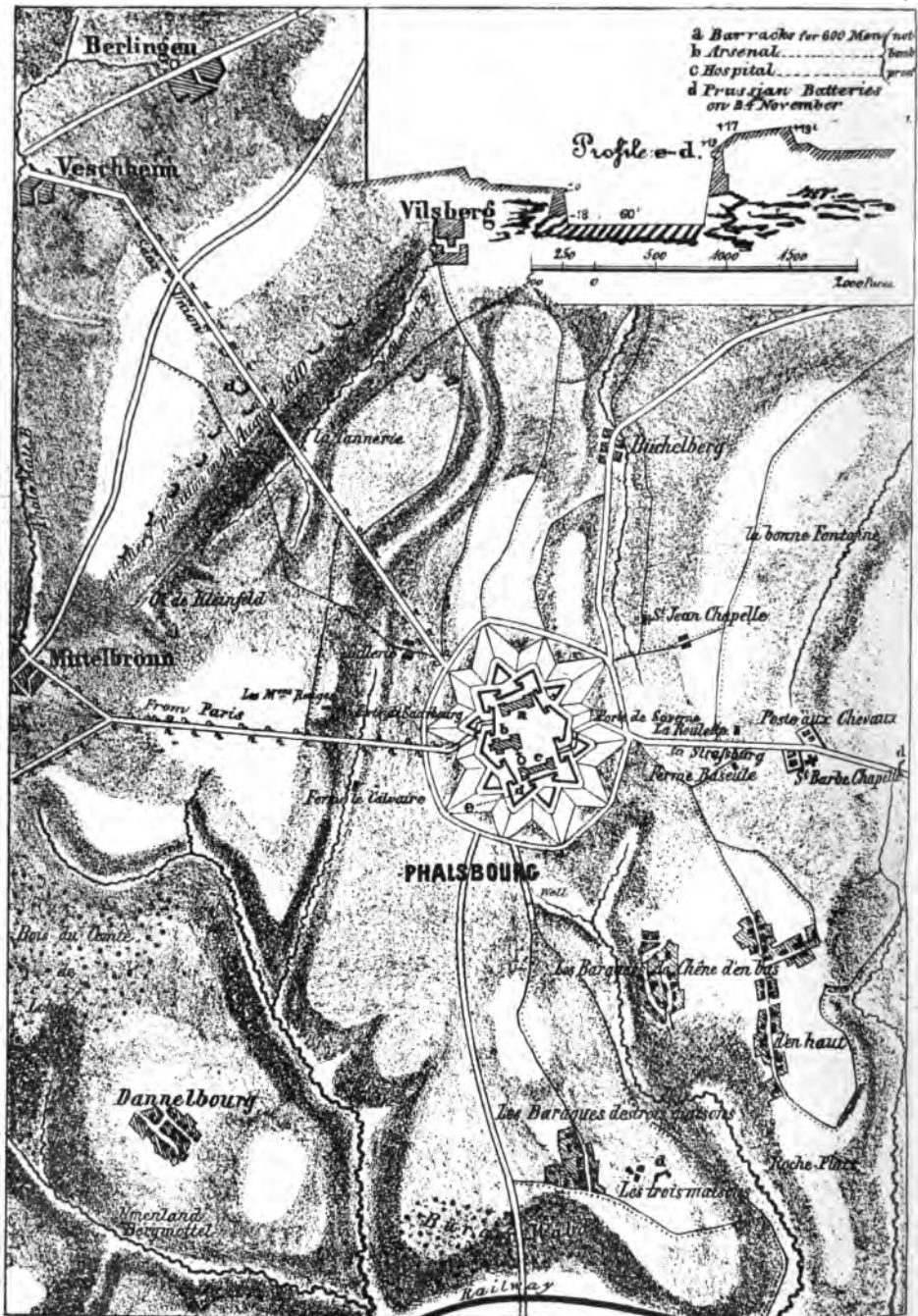
The head of the cavalry division, which had to clear the ground for the march of the IIIrd army, had, on the 24th August, advanced into the neighbourhood of the fortress. On the 25th August the head of the advanced guard of the division arrived before the fortress, and summoned the commandant to surrender the place; in case of refusal a bombardment was threatened.

About 11 o'clock the town capitulated, and was at once occupied by a squadron of the 5th regiment of dragoons, under the command of Captain Von Görschen. Three hundred men were found there, all gardes mobiles, who had not yet received their clothing, and who without delay laid down their arms.

The stores of arms and ammunition which the enemy left behind him were also on this occasion considerable: 5,000 stand of muskets, 3,000 side-arms, 17 guns complete (consisting of three rifled 24-pounders, two rifled 12-pounders, three smooth-bore 24-pounders, seven smooth-bore 12-pounders, and two smooth-bore 6-pounders) became spoil of war.

The railway-bridge that had been destroyed was at once restored by the Royal Prussian field railway detachment, No. 2.





## PFALZBURG.

(PLATE III.)

THE fortress of Pfalzburg commands the mountain road, the railroad, and the Rhine-Marne canal, which all lead from Strasburg by Zabern to Nancy and Paris. The road and the canal lie half a mile ( $2\frac{1}{4}$  English miles) to the south of the fortress. The place is built on the bastioned trace, and has six bastions. The various lines of the fortress see well into the ravines, and over the undulations of the ground in front. The ditches are 24 feet deep and revetted, the escarps being in part cut out of the rock, and the fortress may thus be considered as perfectly secure from assault. Pfalzburg has two gateways, with bombproof barracks in connection with them, and also two large powder-magazines, amply protected against direct and vertical fire. Some of the bastions are provided with hollow traverses, of which the foundations go down to the casemates under the ramparts. Such traverses materially increase the defensive strength of a place, for they afford secure shelter, to the gunners and the guard of the ramparts, against the destructive effect of the artillery of the attack—now a very serious matter—without its being necessary for them to leave the ramparts.

This place, like the fortresses near it, did not delay the IIIrd army in its advance. It was desirable, however, to obtain possession of it, so as to open the communications in rear of the army with Lorraine and Alsace. The VIth Prussian army corps, therefore, received orders to make an attempt to take the place by means of a bombardment.

The 12th division was ordered on this duty. The infantry marched by the valley of the Ziesel, the artillery by the pass of Lützelstein; and by 4 o'clock on the afternoon of the 13th August, the little fortress was completely invested by the 22nd infantry brigade (38th and 51st regiments and 6th jägers). In the evening a reconnaissance was made towards the place, which established the fact that it was amply provided with artillery. During the night an engineer officer crept up to the outer slope of the ditch, and ascertained that the depth of the ditch was seven metres (23 feet). The general commanding, Lieutenant-General Von Tümpling, was satisfied, from these observations, that a sudden assault upon this very small but defensively strong fortress was not practicable, at all events without special preparations. He, therefore, ordered a bombardment with 60 field-guns, of which 24 were heavy. These were to be placed, on the night of the 13th-14th

August, in covered emplacements on the heights of Weschheim, north-west of Pfalzburg. The position taken up for the guns was, upon the whole, the best that could be selected, considering that the formation of the ground was unfavourable for the fire of artillery, and having regard to the position and form of the object aimed at. A certain amount of protection was obtained, and the guns were very nearly opposite to the greatest depth of the fort. 1160 men were told off for the construction of the emplacements. The works were carried on at night, quietly, and, considering the circumstances, quickly; and no attempt was made to destroy them by the garrison of the fort.

At daybreak, at 4 a.m. on the 14th August, Major Reese, of the general staff, conveyed to the commandant, Lieutenant-Colonel Taillon-Taillant, a summons to surrender the fortress, which was refused; whereupon the fire of the batteries commenced, without delay, about half-past 7 o'clock in the morning.

The artillery soon got the range. Swarms of skirmishers, as opportunities offered during the cannonade, ran up towards the fort, on the sides that were not directly opposed to the fire of the guns, in order to operate against the infantry and gun detachments in the work. The artillery of the fort answered the fire with about 10 guns, but produced little or no effect.

As the fort was provided with casemates and other bombproof buildings, it did not suffer much; but the houses in the town, and especially those near the church, were much injured, although they were mostly of massive construction. The artillery must have fired about 1,800 rounds against the fort. Once more, at half-past 7 in the evening, favourable terms were offered for the surrender of the place, through Major Reese, but again without result. The commandant came out in front of the Saverne gate and rejected the offered terms, which were for the free departure of the garrison with their arms, in these words: "Shoot on; you will find soon but a heap of ashes, and myself on the last gun." At the same time, to prevent any misunderstanding, he gave notice of a salute of 15 guns in honour of the following day, the fête-day of the Emperor. As nothing more was to be gained, and the advance of the corps could not be delayed, orders were given for departure. The army corps reached Saarburg at 2 o'clock on the morning of the 15th August, and going on through Blomont got to Luneville on the 17th.

Two battalions of the 51st Lower Silesian regiment remained before the fortress in observation. It should be added, that during this investment the main pipe for the supply of a portion of the drinking-water was discovered and destroyed.

On the 18th and 19th August the 31st landwehr regiment, three battalions of the 71st landwehr regiment, a squadron of the Silesian reserve regiment of dragoons, and a 4-pounder battery, arrived to relieve the above-mentioned detachment of the VIth army corps, which had been left before the fort, and the newly-arrived troops formally invested the place.

Before the departure of the battalions of the 51st regiment,

Colonel Kipping, who commanded it, sent an unavailing summons to the commandant to surrender. The fresh troops employed in the investment were under the command of Major Von Giese, whose headquarters were in Lützelburg. The garrison were not idle, but made several small sorties, to harass and drive back their enemy. One of these was directed, on the 24th August, upon the village of Unter-Eichen-Baracken—"les Baraques de chênes d'en bas." The Prussian outposts there were driven out of the village, which was only recaptured from the enemy on the arrival of reinforcements in the course of the day.

Similar results attended the sorties of the 26th and 27th August, of which the former was directed upon Mittelbronn and the "red houses"—the latter again against Unter-Eichen-Baracken.

In consequence of the peculiar tactical position of the investing force, and the character of the ground round Pfalzburg, a light battery was attached to the force, at first from the II<sup>nd</sup> army corps, but it was subsequently relieved by a battery from the VII<sup>th</sup> corps.

The enemy, in spite of this reinforcement, at 4 o'clock in the morning of the 24th September, made a sortie with 500 men against Büchelberg, and also succeeded in maintaining his position there for a short time. In this action the enemy lost 20 men wounded, and our side 8.

The energies of the investing force were strained to the utmost. All round them bands of franc-tireurs sprang up, against whom frequent reconnaissances had to be made, whilst the watching of the garrison at the same time demanded the closest attention. Fortunately, during October it became possible to add to the weak force several companies, who had been detached for the better protection of the line of communications—such, for example, as those to Saarburg and Saverne. An attempt was also made to secure the cantonments against surprise, as far as possible, by constructing barricades.

All the important events of the war—such as the capture of Strasburg, the battle of Sedan, the capitulation of Metz—were communicated to the commandant; they had, however, no effect upon his conduct.

Meanwhile, a regular siege or serious bombardment of the place was contemplated: the idea, however, was abandoned when the difficulty was considered of making a breach in works founded partly on rock, and of approaching the place by sap. It was believed that the enemy's morale was already shaken, and that, altogether, the importance of Pfalzburg was not such as to justify the sacrifice of time, of stores, and of troops which a siege would require.

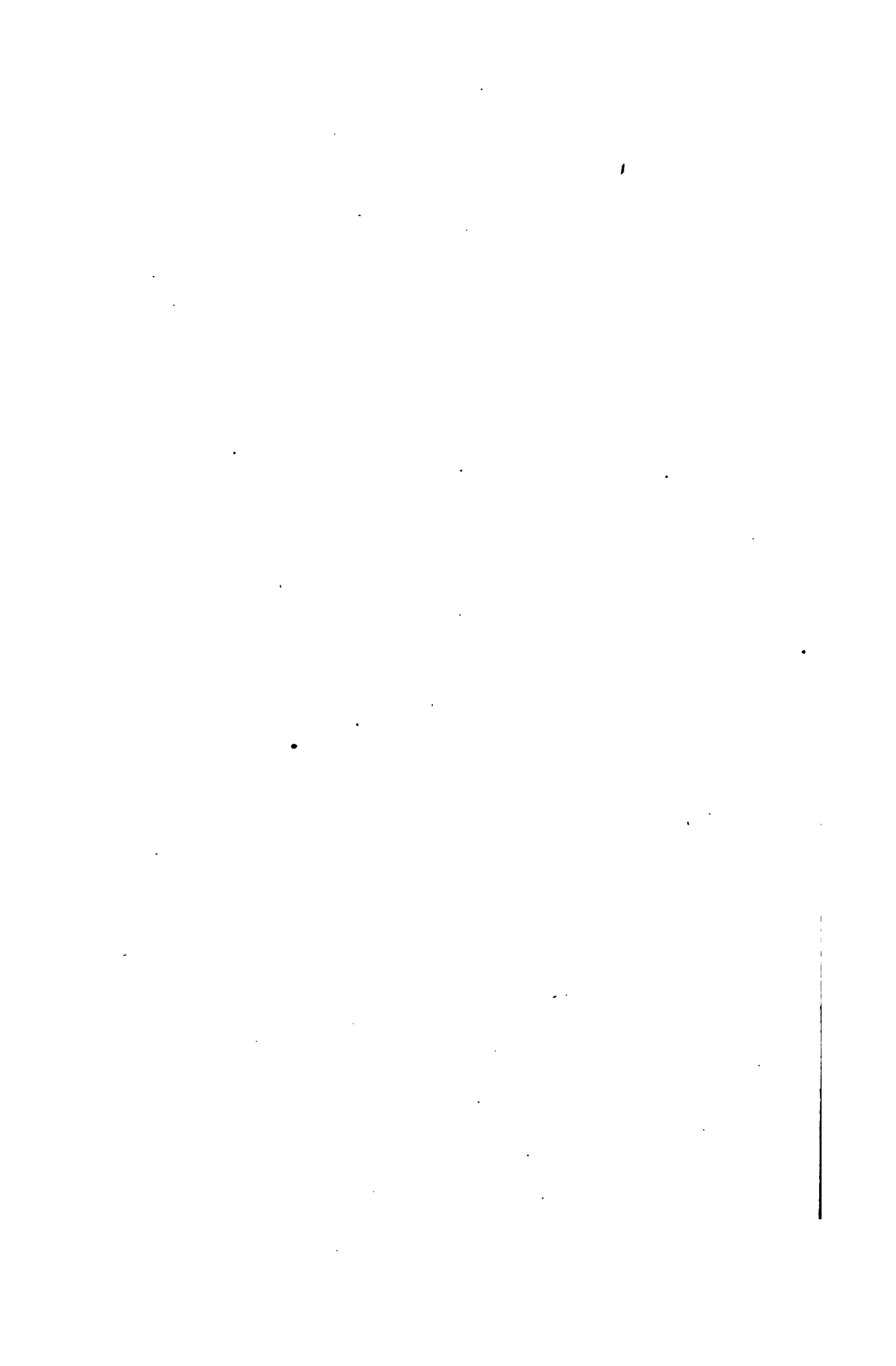
A long time elapsed without any events of importance taking place before the fortress, of whose internal condition, especially with regard to the serious diminution of provisions and consequent disease, tolerably accurate information seems to have been obtained. A bombardment of the fort was, therefore, evidently necessary, in order to see what effect it would produce on the enemy, who was now so hardly pressed.

This was eventually ordered for the night of the 24th-25th November, and three emplacements for the field-battery already mentioned were constructed at Weschheim, Quatre Vents, and Les Trois Maisons; a subdivision at each. The fort was heavily bombarded, from 10 o'clock in the evening till 4 in the morning. The artillery of the work did not remain silent. They answered the fire vigorously and with energy, but, owing to the darkness, without inflicting any serious injury upon the investing force, who lost only one officer and one man wounded. The result of this bombardment was the entire suspension of the fire of the artillery of the garrison upon the Prussian pickets.

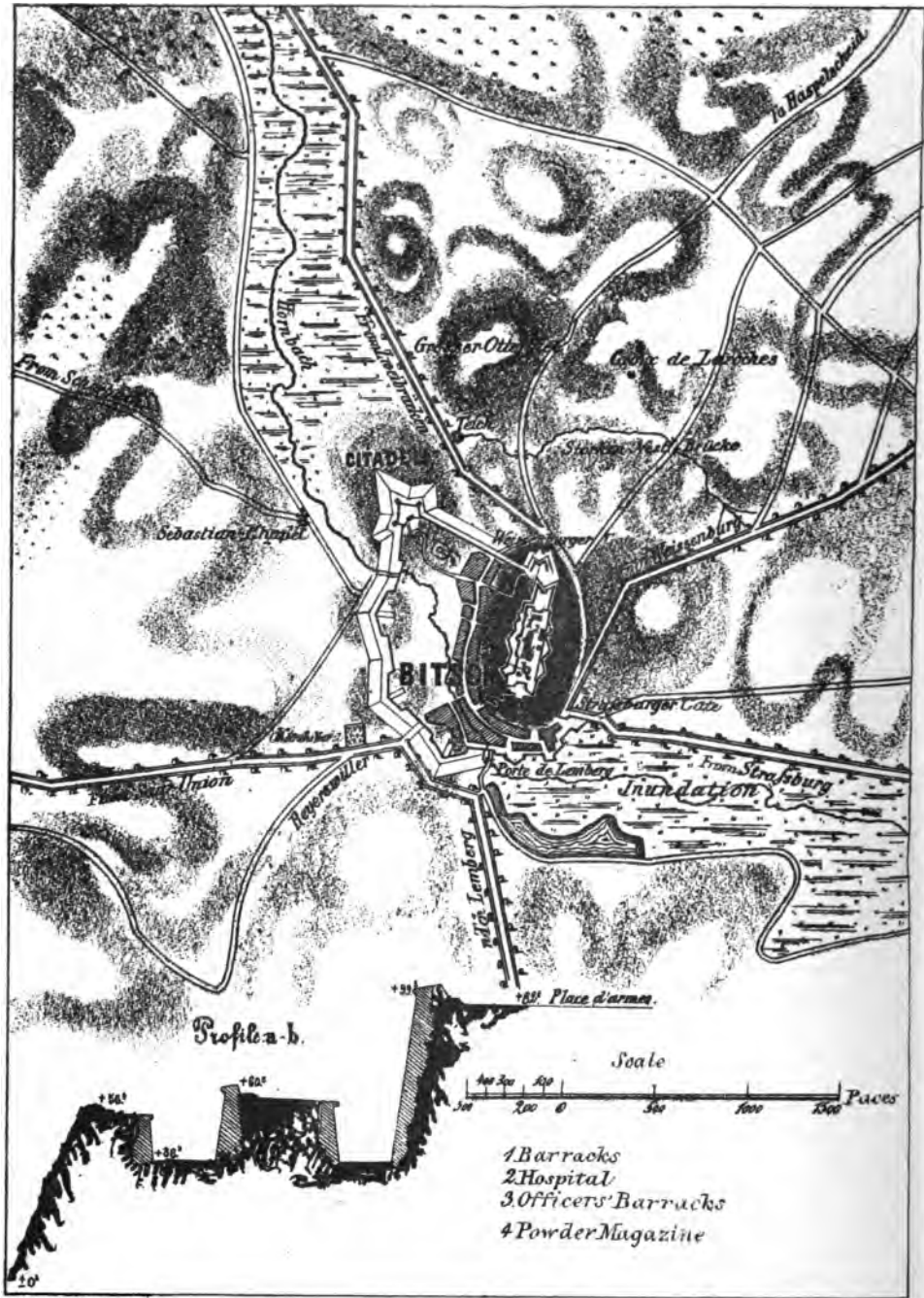
The negotiations for a surrender were not immediately brought about by this last bombardment, but the end was near.

On the 12th December the place surrendered at discretion, and the investing force made its way in, after almost 18 weeks of extraordinarily severe and exacting toil. 52 officers and 1,839 men, including a considerable number of fugitives from the battles of Wörth and Weissenburg, were made prisoners: 65 guns, of which about 30 were rifled, and other warlike stores were captured. No particular written agreement was made for the surrender of the fortress: to this the commandant, who announced his intention of giving himself up in a letter conveyed to Major Von Giese by a deputation, would not consent. The provisions were consumed, and the capitulation was the result, so that the brave garrison and their determined commandant deserved that the endurance they had displayed should be recognised. It was ascertained that the fort had never from the first been completely provisioned, and its fall must have infallibly taken place earlier, but for certain accidental circumstances, favourable to the garrison, which happened at the right moment. Among these was the arrival of some French provision columns after the battle of Wörth, and also a similar train, which, originally intended for Bitsch, was unable to reach its destination, on account of the advance of the Germans having rendered the country insecure, and was therefore welcomed at Pfalzburg.

The town had sustained very serious damage from the shells. Nearly 80 buildings were destroyed by fire, and of the 3,000 inhabitants present before the war, nearly 1,000 had taken to flight. The German government, therefore, allowed the town to receive a considerable sum, out of the proceeds of the money raised by contribution from the French, as compensation for losses sustained in the war, and to aid in rebuilding the houses.







## BITSCH.

(PLATE IV.)

THREE main roads from the Rhine valley unite at the fortress of Bitsch, only three-quarters of a mile (three-and-a-half English miles) from the frontier of the Bavarian Palatinate, and two of them continue to Saar-union and Saargemünd. The place is on the projected line of railroad from Hagenau to Saargemünd. The town, with 3,000 inhabitants, extends along the western base of a precipitous oblong hill 90 to 100 feet high, and is cut in two by the Hornbach, which can be made available for inundation by means of sluices. The meadow-land above and below the town is impracticable, and equally unfavourable for forming saps or building batteries. The country round is a barren hilly tableland, deficient in water, partially wooded, and only broken here and there by solitary scattered rocky knolls. Some of these knolls—as, for instance, the heights between the Weissenbourg and Strasburg roads—overtop the mountain-fort, and afford sites in some respects well adapted for batteries, to which, however, it is difficult to take the guns, on account of the want of roads.

The sandstone rock, upon which the fortress is situated, was from the earliest times crowned with fortifications, which had to be razed at the peace of Ryswick. France, however, caused this mountain-fort to be rebuilt, by the Marquis of Bambelle, in the style of the period, in 1741. The most important part of the fortress consists of a long quadrangle, from whose four angles bastions project. The north front is further strengthened by a horn-work with a ravelin, and also by an advanced tenailed work farther down the slope. The escarp on the long sides is broken into short lengths, to obtain flank defence, and is in part hewn out of the rock. Some 40 or 45 feet below the upper work lies the lower fort. It is connected with the first by communications of every kind, such as ramps and staircases, and follows with its tenailed trace the edge of the almost perpendicular cliff. Two practicable roads—the one on the west, the other on the south-west side of the hill—lead out of the town into the upper fort, which they enter through gates secured by proper works, and provided with drawbridges. Besides these, there is, between the hill-fort and the town, an underground passage entirely hewn or mined out of the rock, and said by military historians to have been used during the attack by the Prussians, on the 15th October 1793. This attack, as is well known, failed.

The defences of the town on the south-west side consist of

bastioned fronts with high revetments and deep dry ditches; the entrances are so closed as to be defensible, and portions of the bridges are moveable. In more recent times defences on a larger scale have been constructed on the west side, consisting of three bastioned fronts with connecting lines on the flanks. At the north-west angle is situated the new citadel. It is designed with deep ditches with three caponiers in them, and its interior consists of a two-storied, massive, bombproof redoubt. A wall 25 feet high, with a glacis in front, joins it, and serves as a covered communication to the fort on the hill, and this wall is flanked by the tenailed work of which mention has been made above. Behind the gorge of the citadel is the powder-magazine, completely buried in the ground, and thus perfectly secure from shell-fire. The remaining bastions are connected with one another by long curtains, and provided with large traverses on the capitals, which contain casemates of all descriptions. Bitsch has the great advantage over many of the small French fortresses of the possession of numerous well constructed casemates, which are appropriated to different purposes. Excepting the governor's house, the chapel, and a barrack on the *place d'armes*, all the buildings are bombproof; there are the most admirable casemates and underground chambers, which can be made use of as secure cover for the troops and their provisions. The well, 240 feet deep, deserves notice, being also arched over and bombproof.

The relative levels of the defences are such, that not only the ground in front, but also the more recent advanced defences in the plain, are perfectly seen into by the fort on the hill; the construction of approaches against the fortress, or of a lodgment in the works lying under the chief fort, is therefore impracticable.

At the time when the French army set out for Germany the corps of General Failly was stationed at Bitsch.

On the 7th August, after the battle of Wörth, a part of the right wing of the French army—apparently the army of MacMahon, which subsequently appeared again at Châlons—fell back on the road to Bitsch, in order thence to recommence their retreat through the Vosges. It is not to their credit that they neglected to blow up the railway-tunnels behind them, a measure that would have done infinite injury to the German army, as regarded the bringing-up of troops and provisions. The Germans, after their victory, did not delay in following up the enemy. On the 8th August the II<sup>nd</sup> Bavarian army corps was before Bitsch. An attempt was made to obtain the surrender of the rock-fort, which was provided with a numerous garrison and armament. With this object a battery of Bavarian horse artillery formed up and fired a few rounds at it. The fort answered at once, and it very soon became apparent that the end was not to be gained in this fashion, without siege-batteries or heavy guns. The advance of the army corps could not, however, be delayed on this account, so that there was no choice but to march round the fortress. This was done in three forced marches, of which the first was to Lemberg, the second to Montbronn, and the third to St. Lorenzen. The

roads traversed were, however, so bad, that, although the pioneers worked at them overnight, they could only be passed by the infantry in file, and by the artillery with the utmost difficulty. We mention these marches to show how great was the influence of even this small fortress which lay in the line of march of the German armies.

Meanwhile, on the German side, the fortress was watched, siege-guns were brought into position from Germersheim, and the 2nd Bavarian regiment of field artillery was charged with the duty of commencing the bombardment. The field-batteries were in conveniently arranged emplacements covered by the ground. Batteries had been built for the heavy siege artillery, and the direction of the bombardment was given to Colonel Kohlermann. It was commenced on the 23rd August, and was continued during the following days, according to circumstances, without ever becoming a pitched battle of artillery.

On the 4th September the French made a sortie with a large force, and a tolerably severe engagement ensued. The defenders were beaten back, with a loss of 50 killed and wounded and 17 prisoners, while the Bavarians lost 6 killed and 10 wounded.

It was soon seen that an energetic defence was to be encountered, for which purpose the German force at hand was insufficient. Accordingly the 3rd and 8th Bavarian regiments, a company of Bavarian garrison artillery, and a Bavarian company of pioneers, arrived before the fortress as a reinforcement. The siege artillery comprised 16 heavy guns and 4 mortars.

On the 10th September Colonel Kohlermann intimated that a bombardment of the fortress and town was imminent, and gave permission to the inhabitants to depart. Many of these would have availed themselves of the humane intention of the commanding-officer of the investing force, but the commandant of the fortress, Lieutenant-Colonel Theyssier, interfered to some extent with their departure, as he wished the citizens to take part in the defence.

After these preliminaries the serious bombardment began, at half-past 5 in the morning of the 11th September. As the weather was clear, the fire of the siege batteries was attended with the best results. Firing was soon begun in the fortress, and the artillery of the besiegers at first kept up the fight very briskly, but afterwards with long intervals of silence. About 2 o'clock in the afternoon the fire ceased on both sides.

On the 12th September the bombardment of the fortress was continued. Towards 6 in the evening the church in the town was in flames, which soon spread in the small closely-built-up town, and between 60 and 70 houses were destroyed. During the day a messenger from the town appeared at the outposts, and begged of the commanding-officer of the investing force that the citizens might depart free. However, after what had taken place, as above stated, this could not be agreed to.

During the night the fire on both sides slackened somewhat,

and did not become heavy again until towards the morning of the 13th.

The results were inconsiderable, and it was not till the 14th September that the siege artillery succeeded in setting fire to some of the few destructible buildings on the *place d'armes* of the fortress—a result, however, that did not have the smallest influence in inducing the commandant to surrender.

It was owing to various reasons that the final effect of this bombardment of four days' duration was much inferior to the results which we had learnt to expect from similar undertakings before other fortresses. The fort was defended by an energetic commandant, was amply provided with ammunition and provisions, and possessed most excellent bombproof cover for the garrison and stores. On the German side they were now convinced that a bombardment alone, even on a larger scale, would not suffice for the attainment of the object in view. A regular siege was not contemplated by the German military authorities, because it would have required a greater expenditure in materiel, troops, and stores, than the value of the fortress would have justified.

Under these circumstances, it was considered advisable merely to observe the place from a greater distance, to prevent attacks of the garrison on German provision and ammunition trains.

A part of the investing force was, therefore, detailed for other duty, and the observation of the fortress was handed over to four Bavarian landwehr battalions and a light field-battery. The heavy siege artillery were sent back to Germersheim. The force remaining before the fortress made every preparation for the winter. The main body went into conveniently situated cantonments—some troops being held in constant readiness—and the supports of the outposts were put into huts erected for the purpose wherever required. Terrible damage was inevitably done to property in the afflicted town, but every alleviation that was practicable was now afforded to the people, both as regarded their maintenance and their trade; it was, however, a question whether these concessions granted to the town were not made use of for the benefit of the French garrison, and especially for the completion of their stocks of provisions.

The observation of the fortress from a greater distance was continued quietly, except when an occasional encounter with the garrison took place.

Such an event was the sortie undertaken by the French at midnight on the 30th September, which was directed against the Rosshall farm. This place, consisting of two homesteads, was set on fire by the troops engaged in the sortie, who were not till after four hours' fighting driven back into the fortress, from which they sallied forth a second time at 8 o'clock on the following morning. It was generally believed that these two sorties were merely undertaken to facilitate foraging operations in the neighbourhood and the supply of provisions to the fortress, for which purpose there was no want of co-operation from the people of the country. For similar reasons, apparently, the French made a

reconnaissance on the 19th November to Hottweiler, where a slight engagement took place.

Then the winter came on, which made the duty of keeping guard over the fortress very severe for the investing force; but their condition was so far improved, that the garrison remained peaceably in their works, and gave no occasion for further hostilities.

In the convention agreed to between Germany and France on the 11th March, 1871, which related to the restoration of the French prisoners of war, the necessary stipulations were made with regard to the garrison of the fortress of Bitsch, which was given over to Germany at the conclusion of peace. It was allowed that the garrison of Bitsch should march out with all the honours of war. They were to take with them arms, baggage, warlike stores, and all records not belonging to the fortress. The surrender of the fortress was, however, delayed until the end of the month of March. The French garrison, about 3,000 strong, was moved in several detachments to Versailles, where they arrived on the 6th April. On the 26th March detachments of the Bavarian investing force occupied the town and the fort, and remained until they were relieved, on the 2nd April, by the 1st battalion of the 60th regiment, thenceforward to be the Prussian garrison.

The town had suffered much from the bombardment. Of 390 dwelling-houses, 150 were entirely destroyed, and the rest more or less injured. The damage was estimated at 1,340,000 francs, exclusive of the loss of moveable property.

The little fortress could boast that it was blockaded during the whole of the time the war lasted, and remained unconquered. It is, however, the fact, as we have seen, that the Germans never besieged it in earnest.

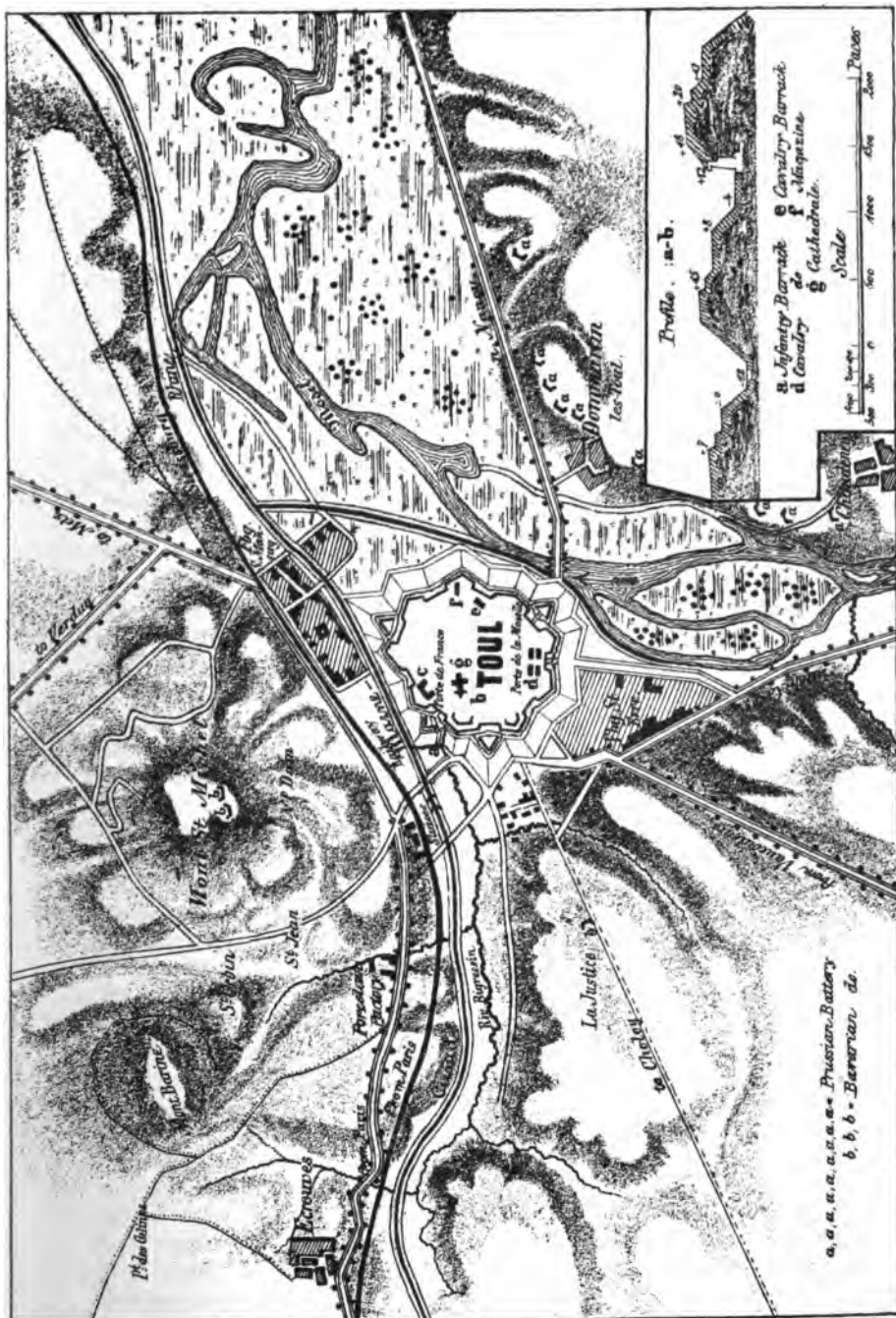
## TOUL.

(PLATE V.)

THE fortress of Toul has 7,000 inhabitants, and is situated thirty-five (164 English) miles from Paris, on the left bank of the Moselle, in a valley also intersected by many smaller streams. On the north the fortress is commanded by the Mont St. Michel, defensively a most important position, which in the plans for the reconstruction of the fortress, about thirty years ago, was disregarded in a manner that now appears unaccountable, because the effects of long-range rifled guns upon siege operations were not then known. The road from Nancy crosses the Moselle. The work rests upon the river, which can be dammed up, so as to form an inundation. For this purpose assistance can also be obtained from the Rhine-Marne canal.

The fortifications consist of a bastioned nonagon, with several ravelins, no flank defences in the ditch, earthen counterscarps, and revetted scarps. They completely encircle the town, but outside the works are situated the suburbs of St. Mansuy on the north-east, and St. Evre on the south-west. The place is rated as a fortress of the second class, and is built without casemates. In default of them some blindages for guns had been made on the ramparts. The garrison were lodged in private houses and huts. There are no main bombproof magazines for powder. Outworks there are none, but some bastions are provided with cavaliers. The railway lies on the north-west of the town, some 500 paces from the fortress. The cathedral has some architectural merit. It is built in the gothic style of the thirteenth and fourteenth centuries, and has four magnificent towers and very fine stained-glass windows.

Although the fortress placed no important obstacle in the way of the advance of the IIIrd army, still the transport of supplies and stores of every description was much delayed, in spite of the use made of the numerous bye-roads, and ran some risk from the attacks of marauding gardes-mobiles and franc-tireurs. The conveyance of the sick and wounded to the rear became continually more difficult as the army advanced, and the time was indefinitely postponed when it would be possible for the transport department to bring to the front, as rapidly as was desired, the artillery stores of all descriptions required for the contemplated siege of Paris. Our complete and excellent railway organisation became paralysed at Toul, so that even at this time it had been considered whether a line branching off from Frouard should not be constructed. Thus,







from the undeniable present strategical importance of the fortress, the occupation of Toul had become for us a necessity.

On the 14th August the head of the advance guard of the 4th cavalry division appeared before the place, and, after a slight engagement with the cavalry of the garrison (cuirassiers and gendarmes), summoned the place to surrender, but in vain. For this purpose Lieutenant the Prince of Hohenlohe was sent with a flag of truce; he was fired upon.

The advanced guard of the IVth army corps, coming up at this juncture, received orders to make a reconnaissance in force towards Toul. The bearer of a flag of truce sent on before returned without having achieved any results, and the trumpeter who accompanied him was shot. On the 17th August two Prussian batteries were placed in position—one under the hill of St. Michel, the other on the road by Gondreville to Nancy—on the east of the fortress. They shelled the place, and fire soon broke out at the Moselle gate. The formation of the ground in the immediate neighbourhood, and the inundation that had been made, apart from the strength of the fortifications, made it impracticable to carry the place by storm. This demonstration caused considerable losses, especially to the 27th and 93rd regiments.

Upon this the army corps resumed its advance, and orders were issued from the headquarters of the IIIrd army for a close investment of the place by the 7th Bavarian brigade under General Thiereck, two squadrons of light cavalry, and two field batteries. Of the Prussians, the corps artillery of the VIth corps and the 38th regiment of Silesian fusiliers, under the command of Lieutenant-General von Gordon, stayed behind to assist the Bavarians.

The Prussian batteries were placed in well-covered positions on the slopes of the hills, near the village of Dommartin; the Bavarian batteries on Mont St. Michel and at the village of La Justice, which joins on to and is a suburb of the town. The French allowed the batteries to be prepared unmolested, although a sortie of the garrison might have been advantageously directed against them. The distance of all the batteries from the place was nearly the same—about 2,500 paces. Orders were issued by H.R.H. the Commander-in-Chief to spare the town, and especially the cathedral. For this reason, and also because it was desired to obtain the surrender of the fortress without bombardment, Colonel Arnold, of the 6th Prussian regiment of field artillery, was sent into the place with a flag of truce. He was referred to the council of war, and brought back the reply that they would not listen to proposals for a capitulation. It was then observed that the preparation of the defences for a siege was not completed, as was indeed generally the case. Neither the railway-works nor the houses in the neighbourhood, shutting in the fortifications, were destroyed or removed. The plantations left standing on the glacis did certainly prevent the besiegers from seeing into the work, but the view from Mont St. Michel was entirely uninterrupted.

On the 23rd August, at 8.45 A.M., the bombardment began,

and was directed at first solely against the works, but afterwards upon the town. A barrack and a forage-store were set on fire, and unfortunately also a military hospital near the barrack was burnt down. Five of these hospitals had been marked conspicuously by the French with white flags with the red cross upon them.

Lieutenant-Colonel von Hartmann was sent with a second flag of truce to the fortress, accompanied by two civilians, but without results, and the firing, therefore, was resumed. Meanwhile the Prussian artillery received orders to follow the IIIrd army in their advance to Châlons, whilst the Bavarian batteries continued their operations before the fortress. Unfortunately, it was not possible to spare the towers of the cathedral, for one of them was used as an observatory by the French garrison. The shot, however, struck only the flat roof of the tower, and destroyed some architectural decorations, but without in any way injuring the beautiful fabric of the building. The French responded at first with moderate vigour, and fired against the German batteries, from their heavy guns, every description of projectile applicable—round-shot, shell, and shrapnel.

The French chassepot bullets fell in the German batteries, showing the great range of these weapons. Altogether there must have been fired against the fortress some 600 rounds from the Bavarian guns, and about 2,500 from the Prussian.

On the capitulation of Sedan the intelligence of that event was communicated to the commandant. Meanwhile directions had been given to use against the fortress heavy smooth-bore garrison guns, to be brought up to Toul from Marsal. The transport of the guns over the slippery country roads, made soft by rain, and up to the elevated sites of the batteries, was a matter of much difficulty.

The place was only invested by the landwehr garrison regiment of Torgau, under the command of Colonel von Hippel. It was the supposition that a larger body of troops was present for this purpose that prevented the enemy from making sorties. He confined himself entirely to observation, and to sending out the usual patrols.

Special mention should be made of the bombardment which took place on the 9th and 10th September, after one more useless summons to surrender. On the last day nearly 1,000 rounds were fired during nine hours. The batteries were placed on both sides of the road to Ecrouves, not far from the porcelain-factory.

But this attempt to make use of the garrison artillery, that had arrived, seemed not to produce the effect desired, owing to the invariably long range, the want of made-up ammunition, and the small striking force of the projectiles. The garrison expected relief from a force said to be 5,000 strong, and to be coming up from Langres.

On the 13th September the 17th division, under the command of Lieutenant-General von Schimmelmann, being considerably strengthened in field artillery, relieved the landwehr troops, and

advanced their outposts much nearer the fortress, in order by degrees to shut the garrison in more closely, and, as far as possible, to prevent them from communicating with the suburbs. This operation was not, however, to be accomplished without loss, for the enemy, bringing a well-directed fire from wall-pieces to bear, resisted the assailants to the uttermost. A reconnaissance of the ground round the fortress, in which his Royal Highness the Grand Duke of Mecklenburg himself took part, made it evident that the place could be seen into from Mont Michel in a manner scarcely credible.

On the Prussian side they went at once to work to place three heavy field-batteries on Mont Michel, a task which, laborious as it was, was accomplished by the artillery in one night, so that the guns were able to open fire by the following morning. The fire was directed on the covered emplacements for guns on the defences, and against the observatory on the cathedral. It was interesting here to observe with what precision the artillery fired, although the distance was 1,900 paces. The second shell fell right on the roof of the magnificent church, and knocked the objectionable observatory from its place.

On September 16th Captain von Rochow, of the cavalry, was sent with a flag of truce into the fortress, but without result. As on former occasions, he was fired upon.

On the next day, as well as on September 18th, the whole of the field-batteries were employed—namely, four Mecklenburg and three Prussian batteries, which had meanwhile been placed in separate positions around the fortress: on the one hand to harass the garrison, for which purpose they fired alternately at the barracks and at the observatory, which was again and again replaced; and, on the other hand, to reply shot for shot to the fortress, in order to silence its batteries, which was also done in a short time.

On September 16th, orders were received for the removal of a brigade of infantry, the 75th and 76th Hanseatic regiments, the cavalry, except one regiment of dragoons, and the whole of the light field-batteries. The remainder were, however, considered sufficient for the capture of the fortress.

There were left before the place only seven battalions of infantry, of the 89th and 90th Mecklenburg regiments, and the 14th jäger battalion, besides a company of pioneers, three heavy and one horse artillery battery, and a regiment of cavalry, the 18th Mecklenburg dragoons. As the force was so reduced, the investment of the place had to be kept up with redoubled vigilance. The outpost duties of the troops, therefore, obviously necessitated great exertions. These duties were, nevertheless, materially increased, when the siege artillery arrived before Toul on September 20, with a complete siege-train, consisting of ten rifled 24-pounders and sixteen rifled 12-pounders, under the command of Lieutenant-Colonel Bartsch, and when, on the 21st and 22nd September, sufficient means being at hand, they were able to proceed to the establishment of the dépôt and the construction of the batteries. Moreover, the preparations above mentioned for the engineer

attack, under the direction of Major Schumann, of the engineers, required a very considerable number of men. The field-officer named had been present before Toul for some time, and had taken in hand the most necessary reconnaissances. He had perceived that bastion No. 2 was unmistakably the point for attack, and in consequence of the simple character of the profile, and the invincible weakness of the artillery of the defence (which had become more obvious during the progress of the siege), had proposed an abridged formal attack. The idea was to open a parallel some 500 paces from the work, making a covered communication only, where necessary, and then advance direct on the breach, which was to be made by curved fire. It was hoped that the water in the ditch of the work might be drawn off by blowing up certain sluices, or by breaching a batardeau that had been discovered with much pains. By his direction Lieutenant Ströbel, of the company of Bavarian pioneers, stationed in Ecrouves as an 'Etappen' garrison, had very cleverly blown up a sluice. This demolition, however, did not produce the desired effect.

In order that the projected works might be executed in safety, the outposts were pushed up as close as possible to the ramparts, and all the suburbs—viz. St. Just, St. Evre, and Mansuy—were occupied. The operation of forming a lodgment was, however, interfered with by the shells of the enemy, which set the villages on fire in some places, and inflicted considerable loss on the troops engaged. Two battalions of infantry, besides the whole of the artillery and the pioneers, were required for the formation of the battery dépôts and the construction of ten siege-batteries, and by an extraordinary effort the latter were got ready to open fire early on the 23rd. From the first no great results were anticipated from the fire of the siege artillery. The enemy had, indeed, answered the fire of our guns, though not with much vigour. The fire was especially feeble from the mortars, which could not be got at by the Prussians. This scanty mortar-fire must, however, be considered as a measure of prudence on the part of the defenders, in order to preserve their guns until the last moment. Now, however, they showed with what force they could reply, so that it became our object to reduce them to silence as soon as possible.

H.R.H. the Grand Duke of Mecklenburg-Schwerin, commanding the 13th army corps, had arrived at Choley from Rheims on the night of the 23rd, in order to be present at the close of the siege. Mont Barine, near Mont St. Michel, was used as a point of observation. H.R.H. the Grand Duke and General von Schimmelmann remained there to watch the events expected to take place; the batteries proceeded with their allotted tasks during the morning; the breaching battery acted chiefly as a counter-battery, as a clump of trees and houses prevented it from performing its legitimate duty. The enemy answered the fire principally with mortars, for the other pieces on the ramparts were soon silenced. Several military buildings and magazines took fire; it was also observed what good results attended the artillery practice on the porte de la France. On the

other hand, the enemy's shells, about 11 o'clock in the forenoon, set the suburbs of Mansuy and St. Evre in flames, both of which were occupied by the Germans.

All arrangements had been made, in order, with the help of the men available, to throw up, on the night of the 24th, the parallel, of which the position had already been determined by the engineer officers, when, at 4 o'clock in the afternoon, it was reported that the white flag waved on the cathedral. The flag was but small, and it could not therefore be made out, with certainty, whether there was not a red cross on it. Recently the enemy had often resorted to the plan of hoisting a flag of this kind near the ramparts, for the purpose of repairing any injuries done to the guns.

The waving of a white flag on the cathedral had, however, been agreed upon as a signal that the Commandant was willing to enter into negotiations. H.R.H. the Grand Duke had, before the arrival of this intelligence, gone from Mont Barine for a short time to Choley. On receipt of the news, His Royal Highness and his staff at once mounted their horses, and rode to the scene of action. On the way to Toul he met Major (Commanding) von Zeuner, who was bringing with him a French staff-officer, on horseback, with his eyes bandaged. This officer brought a letter from the commandant, announcing his willingness to treat with the General of the North German Confederation. Colonel von Krensky, Chief of the general staff of the XIIIth army corps, was accordingly sent for this purpose to the commandant of the fortress of Toul, and on the glacis of the work the negotiations for a capitulation were brought to a successful conclusion, on the basis of the terms granted at Sedan. The French garrison—some 2,300 men, including a few line soldiers, but most of them gardes mobiles, with 130 cuirassiers—filed out of the fortress on to the glacis in front of the Porte de la France; whilst the troops of the division, or as many of them as could be got together, marched with great demonstrations of joy into the fortress and the town. The prisoners were moved into bivouac near the fortress. Of the 109 officers, as many as gave their parole not to serve any more against Prussia were allowed to depart, and the remainder were kept in the fortress under the guarantee of the commandant. The quantity of military stores captured was considerable, and included 30,000 stand of arms, 120 guns, 150,000 cartridges, and other things, besides a flag and some standards. On the 25th, at 11 A.M., the formal entry into the town took place, under the command of H.R.H. the Grand Duke of Mecklenburg and his Highness the Duke of Altenburg. The troops paraded in the Place Dauphine, where the Grand Duke caused a cheer to be given for the Commander-in-Chief, His Majesty the King. The inhabitants had been shut up in the fortress for six weeks, and the North German troops were welcomed by them as deliverers. The garrison had conducted themselves with extreme bravery. They only yielded when they had fired their last shell.

## LAON.

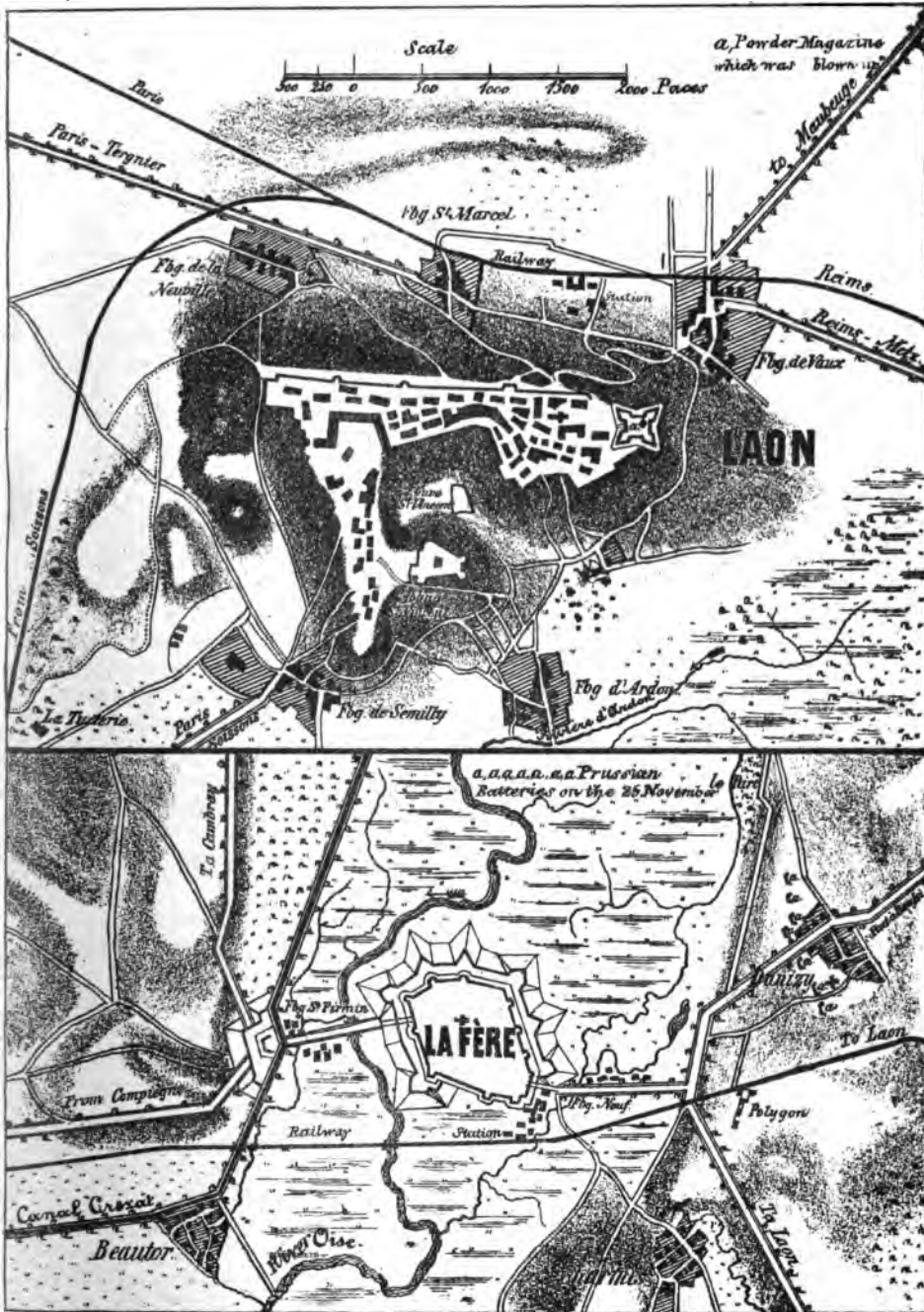
(PLATE VI.)

LAON, a town of 10,500 inhabitants, is situated on an isolated hill about 80 metres (262 feet) high, which commands the Ardon, an affluent of the Ailette. It is at the junction of four railways, of which two come from the north-east and the south-east, from Belgium and from Rheims; while the other two lead on to the westward, to Tergnier (for Namur, Amiens, and Paris), and to Soissons (for Paris). Besides this, the roads from Montcornet, Vervins, Crécy sur Serre, Crépy, Chauny, Coucy, Vailly, Fismes, and Rethel all meet in Laon, so that it is one of the most important points for an army operating against Paris. Laon might have been a rendezvous for the gardes nationales and gardes mobiles, and from it they could have continually disturbed our communications with the rear. It is situated at a distance of 140 kilometres (87 English miles) from Paris by the Soissons road, and 158 kilometres (98 English miles) by Tergnier.

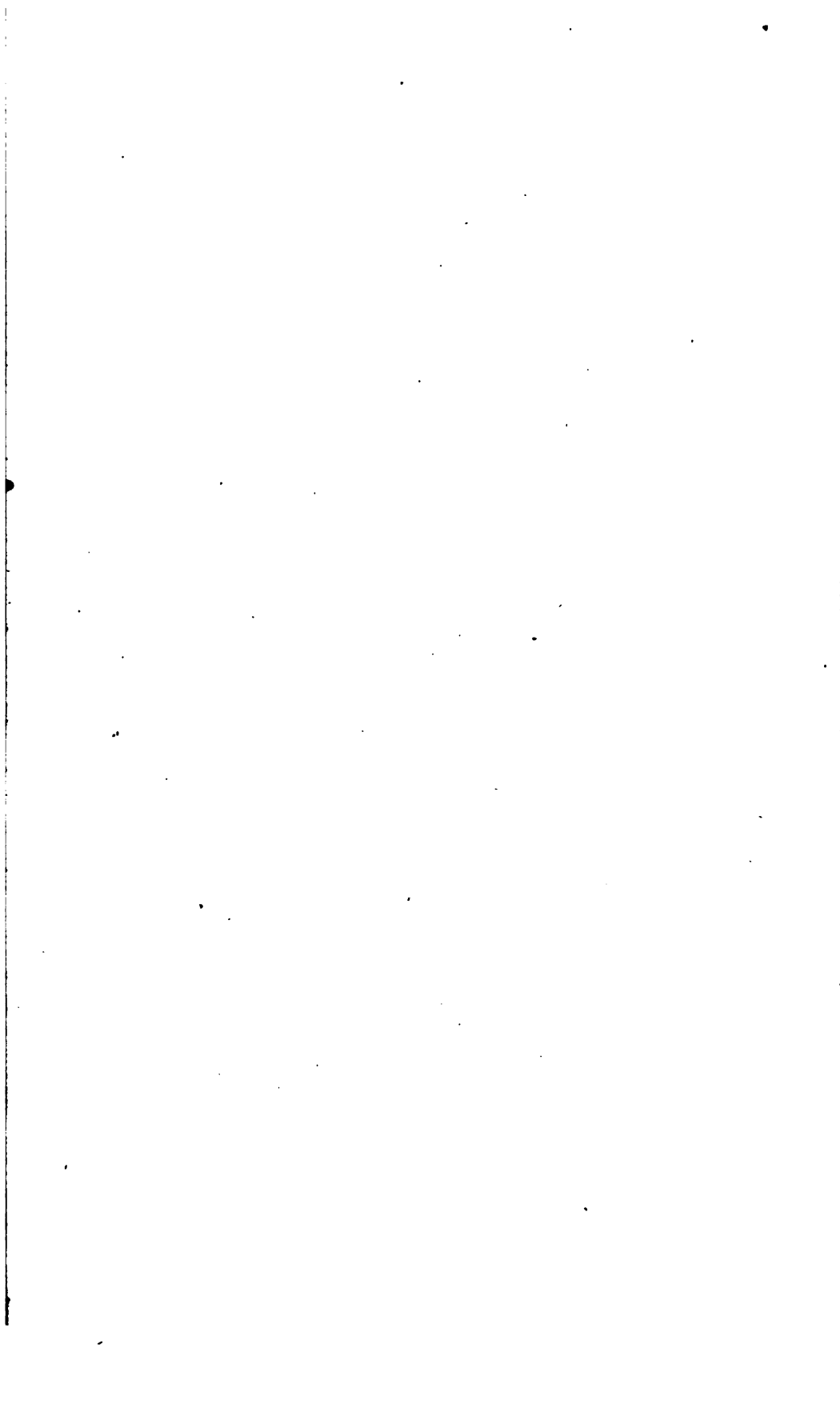
The isolated hill on which Laon is situated is shaped like a half-moon, with the horns to the east.

The citadel, which was strengthened under Louis Philippe, is on the eastern point of the hill, and commands in part the railway station (the only one) on the north of the town, near the suburb of St. Marcel, and to a less extent the suburbs of La Neuville and Semilly, lying to the westward and southward; but more especially the ground lying opposite to the east front, with the suburbs of Vaux and d'Ardon.

A section of the 15th (ulan) regiment had summoned the commandant of the garrison of Laon to surrender on the 8th September, and he had asked for time for consideration till 4 o'clock in the afternoon. When the news of this reached the 6th cavalry division, Colonel von Alvensleben was sent to Laon with the 15th cavalry brigade and a mounted battery, and took with him a treaty of capitulation, ready drawn out. To Colonel von Alvensleben the commandant again made objections, and begged for further time for consideration, till 9 o'clock on the morning of the 9th September. The 4th jäger battalion had been brought up the day before as far as Eppes, and a battery of the 4th corps had marched into St. Quentin. On the 9th September, at 6 A.M., the 14th cavalry brigade and a horse artillery battery also started for Laon. On his arrival at Eppes Colonel von Alvensleben reported that the capitulation was concluded, and that the citadel, with all the troops and military stores, would be given over to the division about half-past 11 o'clock.







Probably the cause of this hasty and unexpected surrender was the open dissension between the commandant, the prefect, the mayor and the gardes mobiles, which was such that none of the authorities mentioned would trust one another; and this, considering the state of affairs, was undoubtedly a great evil.

The division marched into Laon, both batteries took up a position before the town, and the 14th cavalry brigade formed up next to them. The 15th cavalry brigade had previously occupied all the roads round Laon, and remained in their position. The jäger battalion detached a company to occupy the suburbs; two companies marched up to the marketplace of Laon, and occupied all the outlets; the 4th company marched with the divisional staff and the staffs of the two brigades to the citadel. The heads of the 'Intendant' department and Captain Mann, of the horse artillery battery, also accompanied them—the former to take over the general stores, the latter the garrison guns and matériel of war.

At the entrance of the citadel there was a guard of the gardes mobiles, which was at once relieved by a section of the jägers. In the courtyard of the citadel was stationed the garrison—consisting of about 2,000 men of the gardes mobiles, and one subdivision of infantry of the line of the 55th regiment—ready to march off.

The capitulation then took place, on the basis of that of Sedan. All the officers who gave their word of honour not to take further part against Germany were allowed to leave. The arms were laid down, and the gardes mobiles, after they had bound themselves by oath not to fight any more against Germany, were let go. Finally the party of infantry of the line were conducted to the town under escort. A great part of the officers, as well as the commandant himself, remained behind in the courtyard of the citadel, when, as soon as the last man of the gardes mobiles had passed the gate of the citadel, about two o'clock in the afternoon, two terrible explosions took place, one immediately after the other.

The powder-magazine, into which probably all the shells and grenades had been brought, with 26,000 kilogrammes\* of powder in bulk, besides all the cartridges, blew up, and apparently also a mine. The magazine stood at the edge of the courtyard of the citadel. All the persons present in the courtyard, as well as the company of jägers posted there, were almost buried under the earth and rubbish. The shells, loose stones, and fragments of masonry flew right into and beyond the suburbs lying beneath Laon, and injured men, houses, and roofs. The destruction was frightful. Almost every person in the courtyard of the citadel at the time was either killed or wounded—some severely, and some slightly. The half-company of jägers lay on the parade-ground horribly mutilated, and 40 of them were killed on the spot. Duke William of Mecklenburg, commanding the division, Colonel Count Gröben, Major von Schönfels, of the general staff, and Lieutenant Count Ross, of the King's hussars, were more or less wounded.

\* 26 tons, or 585 barrels.

Captain Mann, the only officer on horseback at the moment, was killed.

The commandant, General Theremin d'Hame, was arraigned before a Prussian court-martial, but, however, no blame for the unhappy event could be brought home to him. Probably it had been caused by a subaltern of garrison artillery named Henriot, actuated by revenge, who had found means to obtain the key of the powder-magazine. At the same time he himself perished. General Theremin d'Hame died on the 14th October, of the wound he had received from the explosion.

The booty consisted of 35 guns (of which 8 were rifled 16-pounders) 2,000 stand of arms, and a quantity of other warlike stores.

The town had to pay a contribution of 100,000 francs (4,000*l.*).

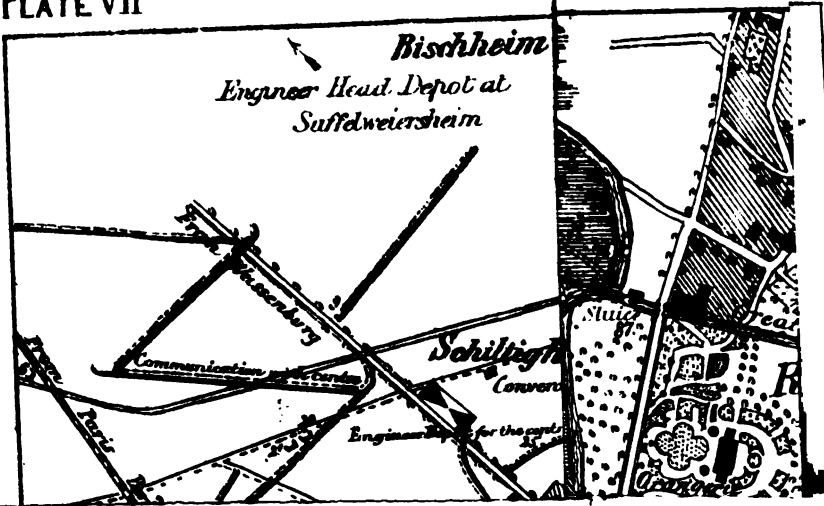
1. The first of the following is a list of the names of the persons who have been elected to the office of Mayor of the City of New York since the year 1800.

2. The second of the following is a list of the names of the persons who have been elected to the office of Mayor of the City of New York since the year 1800.

3. The third of the following is a list of the names of the persons who have been elected to the office of Mayor of the City of New York since the year 1800.

4. The fourth of the following is a list of the names of the persons who have been elected to the office of Mayor of the City of New York since the year 1800.

PLATE VII



## STRASBURG.

(PLATE VII.)

STRASBURG, the capital of Alsace, with 85,000 inhabitants, lies about half a league from the Rhine on the river Ill, which has abundance of water, is navigable, and divides itself into five streams. It is a fortress of the highest military importance. It commands the passage over the Rhine into Germany, and has on that account been connected with Metz and Paris on the one side, and with Lyons on the other side, by railways, roads, and canals. It is, moreover, an important cavalry dépôt, and contains a gun-factory, and an arsenal for the manufacture of carriages and artillery stores.

The nucleus of the defences is the citadel, with its five bastioned fronts, built by Marshal Vauban in 1685; and this is further strengthened by two advanced hornworks, and a number of smaller works down to the Rhine, which is here 500 yards in width. These command the enceinte. On the north and south the town is enclosed by an enceinte with long curtains and spacious bastions, on the system of Specle, which terminate on the parade-ground outside the citadel. At the places where the National gate and the Stone gate are situated, the defences project further out into the country, so as to cover the roads from Wasselonne and Molsheim, and particularly that from Weissenburg, by means of advanced earthworks, among which are the lunettes 52 and 53, often mentioned in the siege. The main enceinte of the west front is of the same character as the lines already described, except that bastions Nos. 10, 11, and 12, at the north-west angle, have counterguards for additional security. Two spacious hornworks are placed outside the west front, so as to give it greater defensive strength. These and the two lunettes 52 and 53 are connected by a glacis common to both, which encloses the north and south fronts in a suitable manner. The profiles are designed with regard to the objects of the works. The escarpes are 18 to 30 feet in height, according to the importance of the work. On this account, and as the ditches are provided with cunettes, and can be filled with sufficient water, the fortress is to be accounted everywhere proof against assault. The greater number of the traverses required are in existence, but the quantity of bombproof cover for troops, warlike stores, and provisions is insufficient. There are no detached forts.

Strasbourg possesses an additional means of defence in the power of making use of the Ill for partial but effective inundation. For this purpose, at the spot where the Ill enters the town, a large sluice is fixed. This, and the numerous other works for the proper management and control of the water, are in good condition, and in situations so well covered, that they cannot easily be destroyed by distant fire. The ground in front of the south side of the fortress consists for the most part of low-lying meadows intersected by numerous watercourses. It can be placed under water for a considerable distance beyond the road, and the artillery practice ground. This is also practicable with the low ground along the foot of the glacis of the north front, and with the glacis of the enceinte of the north-west front.

The ground in front of the fortress is flat, and here and there the view is interrupted by numerous buildings, and by plantations.

On the west front, however, the ground rises, at a slope scarcely perceptible, to the spurs of the Vosges mountains, about a league and a half from the town.

The railway which encircles the town on the south and west has two stations—a terminus inside the town, and a stopping-place outside, at the Austerlitz gate. There is a third station outside the town to the westward. Frequent mention will be made of it during the siege. The railway crosses several streams running into the Rhine, and passes over the river itself by a lattice-bridge, 309 metres (338 yards) long, built in 1858–61. The two banks are also connected by a bridge of boats.

The interior of the town shows plainly its German origin and past history. Both are as evident in its architecture as in the manners and customs, both public and private, of its inhabitants. The magnificent cathedral is especially interesting, and is famous as one of the most remarkable monuments of German architecture. It was founded in 510 by Clovis, destroyed by lightning in 1007, restored upon the plans of Erwin von Steinbach, and completed in 1439 by Hans Hültz, of Cologne.

Commerce is flourishing, owing to the advantages of the situation of the place. The junction of four lines of railway, and of the roads from Paris, Lyons, and Basle, the water-carriage by the Rhone, Rhine and Marne canal, and the proximity of the Rhine, are of great value for commercial intercourse.

Immediately after the sudden and groundless declaration of war with Prussia by France, it seemed as if Strasbourg was to be left untouched by the war, for it was evident that the French invasion of Germany and attack on Cologne must be begun with the right flank turned towards Rhenish Bavaria. But when Southern Germany ranged itself on the Prussian side, the situation of affairs was changed. It became necessary for the French armies to march off hastily in a new direction, and it became more probable that Strasbourg might be seriously threatened. All the accounts state that before the battle of Wörth, the 6th corps, under the command of Marshal Canrobert, was in and round Strasbourg. After the battle was lost the corps marched off in

the direction of Metz, and the garrison of Strasburg was thus so reduced that the place was left in a bad plight. Not even one company of engineers was left in the now-threatened fortress, and its garrison consisted chiefly of national guards. A great number of stragglers from the battle of Wörth found accordingly a welcome reception at Strasburg, and its gates also opened for the reception of many thousands of fugitive country-people. The bridge of boats was broken up, and on the 22nd of July the railway lattice-bridge was blown up on the Baden side of the river. On the French side they only brought the swing-bridge on to the landward piers, and, in addition, destroyed several railway-bridges over the Little Rhine, at Neuhoef and elsewhere. The preparations for putting the works and armaments in a state of siege were just commenced, when the enemy appeared in the vicinity of the fortress.

After the battle fought by the IIIrd army on the 6th August, at Wörth, the pursuit of the retreating French was the first object. The division of the Grand Duchy of Baden, which stood on the extreme left of the army, and had not been actually engaged in the fight, received orders to advance into Alsace, and in the first instance in the direction of Strasburg.

On the 8th August the head of the division arrived before Strasburg. It was believed that the fortress was occupied almost exclusively by national guards, and it was well known that the preparation of the works for a siege was incomplete. Lieutenant-General von Beyer, commanding the division, remained with the main body of the advanced guard a league and a half from Strasburg, and sent Major von Amerongen into the fortress, in order to represent to the commandant the serious disasters of the French army in the field, and to demand the surrender of the place. The commandant, however, roughly refused the demand, and after this the advanced guard employed upon this reconnaissance withdrew to Brumath. The garrison permitted the enemy to advance undisturbed up to the glacis, and made no attempt to destroy the railways or telegraphs to Mühlhaus and Lyons, and this was now effected by us. A cavalry detachment of the Grand Duchy of Baden, under the command of Lieutenant Winsloe, on the 10th August destroyed the railway at Geispoldsheim, three-quarters of a mile (three-and-a-half English miles) south of Strasburg. Meanwhile the main body of the division approached, so that on the 12th August the troops had taken up their positions for the investment. These extended round the whole of the ground outside the fortress, except on the south side, where the work was done by some bodies of troops from Rastatt, who had crossed the Rhine to the south of Strasburg. Kehl was occupied, and the communication with Colmar broken. The French did not allow themselves to be disturbed in their preparations for a siege, on the glacis and the ground beyond. They worked on at the construction of traverses, the preparation of the ramparts for defence, and the removal of the plantations on the glacis, as well as at palisades and barricades for the approaches.



For the purpose of interrupting these works three slight engagements took place on the 13th August.

In the course of the afternoon some selected marksmen were sent up to the glacis, and materially interrupted the works there, without being disturbed by the heavy fire of artillery from the ramparts. About 1 A.M. a company of the 2nd Baden grenadiers (the King of Prussia's) advanced in the same direction, in order to drive back some parties of infantry, who had meanwhile come out from the fortress to the foot of the glacis. A musketry fight commenced, and by this means the object was successfully accomplished. The company, after the performance of their duty, were, in returning, followed by a heavy fire of case and musketry, and had three killed and eleven wounded—among the latter one officer.

In another direction two small detachments of the body guard grenadiers of the Grand Duchy of Baden, each led by a lieutenant, and provided with combustibles, advanced at 9 o'clock in the evening against the railway-station outside the western gate, and set fire to a loaded railway-train that was standing there. Two sections of infantry followed quickly up to the counterscarp of the ditch, delivered their fire at the troops who appeared on the ramparts and at the guns standing there, and quickly retired again. A field-battery meanwhile was brought up to 2,500 paces from the fortress, and fired upon the works which were lighted up by the flaming railway-trucks. The enemy upon this commenced a persistent but perfectly useless fire. At a third place, as early as 11 o'clock in the forenoon, a company of the 5th (Baden) regiment had been for an hour under fire employed in the demolition of the enemy's works without experiencing any loss.

On the 14th August intelligence was received of the issue, on the 10th of that month, of the following proclamation by the Commandant-in-Chief, Divisional-General Uhrich:—

*“ To the Inhabitants of Strasburg !*

“ Disquieting rumours, and fearful reports, have been, intentionally or unintentionally, spread through our brave city. Some people have even ventured to assert that it will surrender without resistance.

“ We therefore protest, in the name of the courageous French population, against such cowardly and criminal weakness. The ramparts are furnished with 400 guns; the garrison counts 11,000 men, besides national guards. If Strasburg be attacked, Strasburg will be defended so long as it contains a soldier, a loaf, and a cartridge. Let the well-disposed be calm; let the others go where they will.

“ Strasburg, August 10th, 1870.

“ The Divisional-General and Commander-in-Chief,

“ UHRICH.

“ The Prefect of the Lower Rhine,

“ BARON PRON.”

On the 14th August, at 5 o'clock in the morning, a company of the 5th (Baden) regiment attacked the railway-station, and opened fire from the railway embankment upon the workmen on the glacis. The fire was answered by some of the guns of the place, and the company suffered a loss of three severely and two slightly wounded.

In the course of the day General von Beyer gave over the command of the (Baden) division to General the Baron von La Roche, commanding the cavalry brigade. The division was placed under the orders of Lieutenant-General von Werder, of the Prussian Army, Commander-in-Chief of the army corps about to be formed for the siege.

In the evening the garrison attempted a sortie in the neighbourhood of the English country-house near Höhnheim.

On the 15th August, at 4 A.M., the Baden pioneers blew up the iron bridge which leads over the Rhine-Marne canal to Robertsau, below the orangery. Field artillery fired from covered positions at the works of defence that had been thrown up, in order to destroy them, while under cover of the darkness riflemen swarmed close up to the ramparts, causing frequent alarms to the garrison. Lingolsheim, Wolfsheim, Schiltigheim, and Robertsau were already occupied by the besiegers, so that the place was closely invested on the west and north, and on the south as far as to Ostwald. In their possession were the railway-stations of Brumath (to Nancy and Metz), Mutzig, and Colmar, and the highroads to Sels, Hagenau, Zabern, Barre, Colmar, and Basle. The communications of Strasburg with the country were as good as cut off. It was suspected that an underground telegraph line existed to Schlettstadt,  $7\frac{1}{2}$  miles (35 English miles) distant.

*August 16.*—Head-quarters transferred to Mundolsheim.

About 2 o'clock in the afternoon the French attempted a sortie in greater force, with about 1,500 men, in order to drive back the enemy near Illkirch, a league south-east of Strasburg. The 8th company of the 3rd (Baden) regiment, under Captain Kappler, had pushed forward a picket from Illkirch over the bridge of the Rhone canal at that place. About 2 P.M. a French squadron attacked them, but were repulsed. Immediately the enemy's infantry showed themselves, while a heavy fire was opened against the bridge over the canal; and a detachment of the enemy's artillery shelled Illkirch from a position in rear, and set fire to some of the buildings there. At the commencement of this attack Captain Kappler had posted his whole company on the bridge of the canal, and sent forward two strong non-commissioned officers' patrols by Grafensteden, and by the locks to the northward at Ostwald respectively, to take the enemy in flank. Major Steinwachs, commanding the battalion, sent immediately out of Ostwald the 5th and 6th companies, under Captains Nagel and Selteneck, as well as Göbel's battery. Kappler's company had for half-an-hour answered the enemy's fire with great coolness and steadiness, when the enemy's artillery advanced to within 250 paces of the bridge over the canal, and came into action. The commander of the

company then caused a short and rapid, but effective, fire to be delivered, and, as the supports had by this time come up, attacked with the bayonet. The enemy did not stand to receive this attack, but took to flight, leaving behind 3 guns, 8 wounded and 3 unwounded prisoners, and 20 killed, as well as several articles of their equipment. This brilliant success cost the brave company but 2 wounded. A subdivision of Göbel's battery now crossed the bridge over the canal and shelled Weghäusel, in which place the enemy had rallied on his retreat. The 5th and 6th companies, who then undertook the pursuit, could not again come up with the enemy, who were estimated to amount to about 1,500 men—zouaves, turcos, chasseurs, and artillery.

*August 17.*—The French attempted a second sortie against the Robertsau, but were beaten back. On the German side the most exposed parts of the besiegers' positions were prepared for defence in a proper and suitable manner, and the approaches were barricaded. Field-hospitals were established in Brumath, Vendenheim, Oberhausbergen, and Hohnheim. Prussian railway and Baden telegraph officials took over the duties of their respective branches. The neighbourhood was requisitioned for labourers and intrenching tools, and in some places resistance was made and ill-will was shown. This was the case in the rich towns of Ernstein and Morstein, which had in consequence to pay a contribution, first of 150,000 francs (£6,000), and in the end of 300,000 francs (£12,000).

In the forenoon fire was opened from the Baden field-batteries, which had taken up a position in a line with Kehl. The fire continued all day, and was briskly answered by the garrison. During the previous night a sharp action of artillery and infantry took place between Königshofen and Strasburg, and outside the west front. Several houses were set on fire there by the shells.

*August 18.*—Königshofen was consequently brought within the line of investment, after a short action of artillery. The fire from Kehl was continued. On the night of the 18th-19th August the Baden artillery took up a position close to the road from Lingolsheim to Strasburg, and set on fire some of the houses at Strasburg at the first shot, and the flames spread rapidly. The enemy answered with 24-pounder solid shot.

*August 19.*—The fire was kept up from 16 field-guns, chiefly against the citadel and the adjoining fronts. It was opened at 7 A.M., stopped from 12 till 2 o'clock, and continued again till evening.

The fire was of course answered by the artillery of the garrison, who, however, shelled not only the batteries, but also the town of Kehl, which lay exposed, beyond the line of fire. Lieutenant-General von Werder, commanding the siege corps, remonstrated against this conduct in a letter, in which he said: "Such a mode of warfare, which is unheard of among civilised nations, compels me to make you personally responsible for the consequences of this action. I shall, moreover, cause the damage to be estimated, and obtain compensation by a contribution levied in Alsace."

These valuations were, in fact, made in Kehl, and General Urich is said to have replied that he regarded the bombardment of the city of Kehl as reprisals, on account of the city of Strasburg having been shelled by the besiegers' artillery without the usual notice being sent beforehand. According to other accounts, however (and this should be noted), Lieutenant-General von Werder, on the contrary, threatened to bombard the place fourteen days beforehand, and caused the proper notice to be sent 24 hours before the firing began. It was clearly, therefore, the business of the French authorities to pass this notice on to the citizens, and it was their fault that the inhabitants had not sufficient time to prepare for the bombardment, and were therefore taken by surprise.

It should, moreover, be observed, that in the absence of any detached forts round Strasburg, the besieger was able to place his batteries comparatively close to the fortress, and that, if he wanted to fire upon the works at all, it was quite inevitable that the town should also be struck, and should suffer terribly.

On the 19th of August fourteen houses were burnt down in the city of Kehl (Stadt Kehl), and the fire did still greater damage, comparatively, in the adjoining village of Kehl (Dorf Kehl). In the former place the church was turned into a hospital. Several shells fell close to the Baden temporary hospital constructed in Dorf Kehl.

In the part of Kehl near the Rhine, especially in the neighbourhood of the Fingach brewery, the brewery itself, the Palmen brewery, and several houses of the inhabitants of the upper classes, were destroyed. The Männer-Hilfsverein (? Humane Society) of Kehl worked with great self-sacrifice at extinguishing the flames, and those of the inhabitants who could sought refuge in the neighbouring villages.

The bombardment of Strasburg from the left bank of the Rhine continued, and the result was that a more serious fire broke out in the Weisse Thurm-gasse (White Tower street). The desire, on this account, of the inhabitants for a surrender was brought to the notice of the commandant, but without effect. As it had become necessary to obtain French surgeons for the French wounded, a flag of truce with a trumpeter was sent into the fortress; but as they were both fired at, and the latter was wounded, the design had to be abandoned.

A company of the 2nd Baden grenadiers, under the command of Captain Hilpert, had prepared for defence the outskirts of the village of Schiltigheim, on the side next the fortress.

Towards evening the French made a sortie with two companies against the outskirts of the village, but were repulsed. The enemy lost three men killed and eight wounded, and Ruth's company of the 4th Baden regiment, posted in reserve on the Kirch-platz, pursued them as far as the glacis. The bursting of one of the sluices in the place caused temporary damage to the inundation-works of the fortress, but it was soon repaired.

*August 20.*—The investing force began to make more extended arrangements for defence at Schiltigheim, as being a

*point d'appui* lying close to the fortress, and of great importance to the investment, having regard to the later operations of the siege. The approaches to the village in the direction of the fortress were barricaded. Shelter-trenches and covered positions for outposts were laid out. On the side of the enemy the works were masked by the plantations, which had been unaccountably left standing, in consequence of the hasty manner in which preparations for the siege had been made. The brewery in Schiltigheim and the glue-manufactory in front of the Spital gate had already been set on fire from the fortress, in order not to afford cover to the besiegers.

Fire was kept up against the fortress from both banks of the Rhine.

*August 21.*—The head of the siege-train reached Vendenheim. The train consisted of 200 guns rifled on the Prussian system, and 100 smoothbore mortars; 40 of these guns were at once brought into action against the fortress. Lieutenant-General von Werder asked the commandant, in vain, to remove the observatory erected on the tower of the cathedral, in order that it might be possible to save this magnificent work of architecture from destruction. With similar results he endeavoured to have the military hospital moved out of the line of fire.

The commandant sent out of the fortress, in detachments of ten men each, 100 Germans, who belonged to the foreign legion. Upon this, great dissatisfaction against the Germans showed itself among the population, who broke out into many acts of violence against them.

*August 22.*—The commandant asked to send the women and children out of the besieged place. As this proposal would have led to a great demand for transport and other inconvenient results, it had to be refused.

*August 23.*—The Kehl batteries, which had been armed since the 18th August with garrison guns from Rastatt, kept up an effective fire day and night against the citadel, and produced a conflagration there.

On the left bank of the Rhine the town and fortress of Strasbourg was fired into from all sides. The cannonade became heavier towards evening. The infantry kept continually drawing nearer to the fortress. The pickets and outposts were obliged to entrench themselves in shelter-trenches and rifle-pits, to get cover from the fire of the enemy.

*August 24.*—On the night of the 23rd–24th August the Baden infantry advanced against the railway-station on the west front, and thus approached within 1000 paces of the fortress. The station was taken without any loss.

In the evening the bombardment of the west front with siege artillery was begun. For this purpose the Prussian siege artillery had built 13 siege batteries (Nos. 1–13) during the preceding night, and had armed them partly with rifled 24-pounders, and partly with heavy mortars. The result was that two large fires broke out in the town, and a third in the citadel; and the arsenal, containing

the workshops for the manufacture of artillery stores, carriages, &c. was destroyed. The explosion of a small powder-magazine was also observed. One of the two mortar-batteries erected by the French on the island of Sporen was silenced by the Baden artillery.

The same day there were twenty houses burnt in Kehl, and others were very much damaged.

*August 25.*—On the night of the 24th—25th an exceedingly heavy fire was directed on the town and fortress from the whole of the batteries; ten rounds were fired per minute.

It was determined to destroy a mortar-battery which was placed above the Rhine baths on the other side of the railway embankment, and had seriously injured the Kehl batteries. For this purpose, on the night above mentioned, one officer and forty-five men of the 6th Baden regiment and three gunners crossed the Rhine in perfect silence, but were unable to effect their object, because the French had already withdrawn the pieces of ordnance to the fortress. The detachment accordingly set the bath-house in flames, and they were, in retreating, exposed to a heavy fire.

The greater part of the inhabitants fled from Kehl. In order to diminish the danger from the falling shells the streets of the town were strewn with litter. Workmen were brought in from the neighbourhood, for three or four leagues round, to work at the batteries.

The bishop of Strasburg appeared at the headquarters of the besiegers to beg for a cessation of the fire. There was the less chance of his wish being granted, since it appeared to be uttered more as a matter of form than as a serious request.

About 11 A.M. the garrison made a sortie from the White Tower gate, with a small detachment and two guns, against the 7th and 8th companies of the 3rd Baden regiment.

*August 26.*—Eight additional 24-pounder garrison guns arrived at Kehl from Rastatt, and were immediately placed in battery, and fired during the day and the night until 4 o'clock in the morning.

The bombardment against Strasburg was continued, chiefly from the battery of the Robertsaue, after a pause from 4 A.M. till 12 noon, for the purpose of awaiting the result of the efforts of the bishop to influence the inhabitants. Four several great conflagrations were observed, including the magazines and other buildings in the citadel, which were in flames. The fire from the fortress became comparatively weak. It had, however, destroyed utterly the greater part of the town of Kehl between the railway-station and the Rathhaus (town-hall), while the village of Kehl, south of the town of that name, had suffered but little.

*August 27.*—On the night of the 26th—27th the number of batteries on the Kehl side was increased by a mortar-battery, which was armed with eight 50-pounder mortars.

During the past night five Baden pioneers succeeded in destroying some dams which were intended to raise the level of the water in the ditches of the fortress. On account of the importance of

the object and the danger of the operation they were awarded a gratuity of 1000 thalers (about £150).

To-day, again, the fire was but slack from the fortress, while that of the besiegers was maintained with unabated vigour. A flag of truce was sent to the besiegers to ask for some surgical appliances for the citizens. This showed the great effect of the batteries of the attack, but also the little foresight that had been displayed in the town in preparing for the event of a siege. The surgical appliances were given most willingly, and in return some ice was obtained, which was required in the hospitals. The mayor of Strasburg in vain represented to the governor the desirability of surrendering the fortress. In consequence many persons began to abandon the city; the greater part betaking themselves to Switzerland.

On the previous night the advanced posts had been pushed forward to within 400 paces of the fortress, and had there entrenched themselves. The object of this was to cover and conceal the construction of the first parallel. The artillery at the same time built ten batteries, which were numbered 14, 15, 16, 17, 19, 20, 21, 22, 23, 25.

*August 28.*—The bishop of Strasburg made proposals for mediation. He came out to Schiltigheim, where Lieutenant-Colonel von Lescinsky the chief of the staff of the Baden army, conferred with him on behalf of Lieutenant-General von Werder. The bishop considered the bombardment was contrary to international law. His views were refuted. He begged then permission for the inhabitants to depart, and this request was refused. The request of the bishop for an armistice of twenty-four hours was granted, on condition that an assurance should be received within an hour that the governor would commence negotiations. He was also invited to come out and make himself acquainted with the preparations for the attack, or to do this by deputy. On his return a regular platoon-fire was commenced upon Lieutenant-Colonel von Lescinsky, although he bore the flag of truce in his own hand. The flag was riddled with bullets. The attempt at mediation was thus quite useless.

Meanwhile the bombardment on both sides was continued. Captain von Faber, of the Baden garrison artillery, sank under his severe wounds at Korck.

Both towards evening and during the night a brisk fire was kept up between the outposts on our side and the riflemen of the garrison, who were posted in the covered way.

*August 29.*—In the night of the 28th–29th, the shelter-trenches of the advanced posts of the besiegers between Königs-hofen and the fortress were pushed on to within 500 or 600 paces of the town; a small sortie in that quarter was repulsed, and the fire of the guns continued as before. At noon a sortie took place, which was repulsed by detachments of the 34th Prussian regiment.

It may be well to mention here that the bombardment proper began on the 24th August, and lasted, with some intervals, three days. On the Strasburg side the bombarding batteries, thir-

teen in number, were all situated on the front that was subsequently attacked, and fire was opened from 26 rifled 24-pounders and 28 heavy mortars. On the side of Kehl there were six batteries in action, armed with 32 heavy rifled guns and 12 heavy mortars. The other side of the town and fortress was cannonaded with field-guns.

The effect of the artillery of the defence was not inconsiderable: the villages of Königshofen and Schiltigheim, which were within the range of the guns, were completely destroyed; the Galgenchänzli had suffered severely, and the railway-station at Kehl was set on fire by shells and completely burnt down, after the inhabitants of that part had succeeded with difficulty in saving it from a fire that broke out only a few days before. Of the destruction caused in Strasburg by the bombardment only the most important instances will be noticed here. The Krothenaue, the street leading to the gate of Austerlitz, the quarters De Pierre and of the national gate, the railway-station, the corn-exchange, the artillery school, the cannon-foundry, the large building of the garrison staff on the Kleberplatz, the neighbourhood of the cathedral, all suffered severely, and many treasures of art and science were destroyed: for example, the ancient and famous library, with its 400,000 volumes, and valuable documents and manuscripts, the museum of art, the collection of pictures, and the Neukirche, with its famous fresco paintings. The damage done to the cathedral, that memorial of early German architecture, was happily not very great. Although the upper part of the roof above the arch was burnt, the interior was uninjured, with the exception of one glass window. The celebrated astronomical clock remained unharmed.

The siege artillery were directed to spare the cathedral, and previous notice was given of the few shots that were fired, chiefly against the tower, in consequence of the enemy having erected an observatory there, with telegraphic communication, whence the besiegers' works were completely seen into.

Serious injury had been done to the private property of the citizens by the inundation around the fortress, which was, however, a most efficient measure of defence. The inundation placed the surrounding low ground and many of the cellars in the town under water. In the greater number of the latter no provision had been made for such an event, and the entry of the water, therefore, caused great inconvenience, and prevented the buildings from being used, either as shelter for the people, or as stores for provisions. An attempt had, indeed, been made at Erstein, about 2½ miles (11½ English miles) south of Strasburg, between the road leading to Schlettstadt and the Rhine canal, to divert the waters of the Ill, which there flows through low ground intersected by many watercourses, and is connected by channels with the Rhine. An attempt had been also made to lead off the water at the discharging sluices of the inundation close to the fortress on the south front, at the point where the Aar, a branch of the Ill, the Ill itself, and the Rhine-Marne canal, are united; and the destruction of the sluices Nos. 87 and 88 in the Rhine-Ill canal had been under-



taken, and had resulted in a perceptible reduction of the level of the water in the inundation and in the ditches.

The opinion of the inhabitants, headed by the clergy, was decidedly against a vigorous defence of the fortress; several unavailing memorials were sent by them to the commandant, to induce him to surrender the place. The prices of most kinds of provisions for the inhabitants were raised to exorbitant amounts, and as the supply of beef was long since exhausted, people ate horse-flesh. A hundredweight of potatoes cost 12 francs; and in this populous town there was neither butter nor fresh vegetables.

The strength and composition of the garrison were ascertained. It consisted chiefly of fugitives from the battle of Wörth of the 21st, 23rd, 28th, 33rd, and 74th regiments; besides turcos, zouaves, spahis, and cavalry of every description, and this peculiarity of composition rendered the maintenance of discipline difficult. There was among them none of that steadiness which belongs to well-disciplined troops, as might be seen from the way in which attacks were executed. By the burning of the military establishments great quantities of warlike stores had been destroyed, and by the vigorous bombardment the defensibility of the place had been very materially reduced.

Although it was well known that General Barral, of the artillery, who succeeded in entering the fortress in disguise during the investment, must have, in fact, had the actual direction of the defence, still the Governor (General of Division Uhrich) was acknowledged to be a man of honour; and it was not probable that this meritorious officer would be brought to capitulate easily, after having repeatedly refused the summons to surrender.

In this state of affairs it became certain, by the 26th of August, that the object in view was only to be attained by a regular siege, and that thus also the sufferings of the unhappy city would be abbreviated as much as possible. The preparatory measures, to which attention had prudently been paid at the very commencement of the campaign, were now rapidly carried into effect.

Accordingly, in order to be prepared for all events, the siege-train was despatched from Magdeburg, Coblenz, and Wesel. Its composition and the numbers of guns of each description were in every respect carefully considered. Experiments had been made by the Prussian Artillery Experimental Committee with rifled siege artillery, especially with 15-centimetre (6-inch) guns, and 21-centimetre (8·27-inch) mortars, both of which fire an elongated shell. The results of these trials, and the use of demolition batteries (*Demolitions batteries*), by which, with suitable guns fired at appropriate elevations, hidden escarps can be breached at great distances, were to be tested in actual warfare for the first time at Strasburg.

In deciding upon the place for the artillery attack, it was contemplated that the batteries already existing on the front attacked would be maintained for the purposes of the bombardment, and especially that, from the Kehl batteries, which came into play

about this time, fire would be kept up, because they were best adapted for operating against the citadel, and for rendering it impossible to defend the fortress in that quarter.

For the engineer attack an engineer siege-park, which had recently been formed for the first time, was brought up before the place.

Lieutenant-General von Werder, of the Prussian Army, was appointed to the command of the siege corps, with Lieutenant-Colonel von Lessinsky, of the general staff of the Grand Duchy of Baden, as chief of the staff. Lieutenant-General von Decker was appointed to command the siege artillery, and Major-General von Mertens was appointed Engineer-in-Chief.

The siege corps was composed as follows :—

1. *Infantry*.—

- (A) The landwehr division of the guard.
- (B) First reserve division, to which were attached the 30th regiment from Mainz, and the 34th (Pomeranian) fusiliers, which latter regiment, immediately after the declaration of war, had been brought up from Frankfort to Rastatt, and had already been employed during the investment before Strasburg.
- (C) The Baden division.

2. *Cavalry*.—The 2nd reserve regiment of Prussian dragoons; the 2nd reserve regiment of Prussian ulans; and the Baden cavalry, consisting of three regiments of dragoons.

3. *The Siege Artillery*, altogether 6,000 or 7,000 strong, was composed of 29 companies of garrison artillery belonging to the guard, and to the 4th, 5th, 6th, 7th, and 10th regiments, 4 Bavarian garrison batteries, 4 Wurtemberg garrison batteries, and 2 Baden garrison companies.

4. *Pioneers*, (Engineers), altogether 2,200 strong, two 'combined' battalions of garrison pioneers, which were composed of 12 companies of garrison pioneers from the districts of the 1st, 2nd, 5th, 6th, 7th, 8th, 10th, and 11th army corps, in addition to two companies of Baden field pioneers, and a company of Bavarian garrison pioneers, which, however, only arrived towards the end of the siege. Colonel Klotz, of the royal Prussian engineers, was in command of the whole of the pioneers.

When the formation of the corps was completed, the staffs for the siege artillery and engineers were appointed. Lieutenant-Colonel von Scheliha, of the general staff, formerly of the artillery, acted as chief of the staff for the former; and Lieutenant-Colonel von Waagenheim, from the War Office, for the latter. Six field officers of the artillery were appointed commanders of sections, and 20 engineer officers were told off for duty in their own department before Strasburg.

The siege army was, altogether, nearly 60,000 strong. The headquarters (Lieutenant-General von Werder) were fixed in Mundolsheim for the siege artillery, and for the business of the engineers. The division of the Grand Duchy of Baden had its headquarters in Oberschöffelsheim and in Lampertsheim, where

was the residence of H.R.H. the Grand Duke of Baden, who followed the progress of the siege with great interest.

From the accurate knowledge the besiegers possessed of the whole of the fortress, the selection of the front of attack was not difficult. The north-west angle of the enceinte was decided upon for the purpose. Its position was so salient that a comparatively narrow front of attack was admissible, and this front could be developed on ground almost entirely clear of inundations. The parks were placed near excellent roads and other means of communication with the dépôts in rear. Thus all movements of the siege stores to a flank, which would have caused waste of time, were avoided. The citadel had already been terribly injured, during the investment and bombardment, by the batteries at Kehl, and, moreover, was of little use on the front selected for attack, so that enfilade-fire on the attack from thence, or from the adjoining works, was little to be dreaded. The difficulties to be met with in gaining possession of the ramparts, or in entering the fortress, on the front in question, would also have been experienced in a greater or less degree on all the other fronts.

The siege park was situated on the right, the powder magazine on the left, of the highroad, north of Mundolsheim; the engineer park was in Suffelsweierheim.

On the night of the 29th–30th August, the first parallel was opened, and at the same time the approaches to it from the rear were made.

The working-party was furnished by the 1st and 2nd landwehr regiments of the guard and the pioneer battalions, so far as the latter were not required for supervision and other technical duties.

The parallel rested with its left flank on the Ill, crossed the road leading from Strasburg to Schiltigheim and Weissenburg, and the railways to Paris and Basle—the latter line, as it happened, by the over-bridge to Wasselonne—and was thence continued to the south-western outlet of Königshofen. It extended, therefore, beyond the ground covered by the attack, by almost half its total length, which amounted to 5,700 paces.\*

The distance of the parallel from the fortress was, on the average, 800 paces; and this was a very favourable circumstance, in comparison with the siege of Sebastopol, where the besiegers were obliged to execute the same work at a distance of over 1,600 paces from the works.

The communications in rear, from the principal dépôt, were constructed in a zigzag form, with five returns, and occupied the ground between the highroad to Weissenburg and the railway to Paris. They were nearly in the centre of the attack.

Some short trenches of communication were also made on the left flank, to connect with the village of Schiltigheim, which was very conveniently situated for the approach on this side.

The covering troops were posted, and the working parties marched to and fro, in accordance with instructions given for these

\* About 4,700 yards.

purposes, so far as local circumstances did not require a departure from the instructions.

During the first night the parallel and the communications from the rear were excavated to a depth of 4 feet and a breadth of 3 feet at the bottom, and this section was widened, in the course of the 30th August, to 8 or 9 feet at the bottom. Thus the breadth required for the trenches, as communications, was obtained, and sufficient thickness was also given to the parapet. The parallel was in many places cut into steps for offensive movements.

Three engineer depôts were also formed, one for the centre and one for each flank, as shown in the plan.

The enemy permitted all the works to be executed without interruption. It was not till 6 A.M. on the morning of the 30th August, that some unusual movements were observed on the ramparts, but at this time there were already ten new batteries, with 46 additional siege-guns in action. These were batteries Nos. 14 to 17, Nos. 19, 20, 21, 22, 23, and 25. The bombarding batteries Nos. 1 to 13 also continued in action, so that there were firing at this time

30 long rifled 24-pounders,  
42 rifled 12-pounders,  
28 heavy mortars,

altogether 100 pieces of siege ordnance.

The enemy was evidently taken by surprise at the execution of the siege-works mentioned, and was unprepared for them. This was apparent from the batteries of the attack being slackly answered. These were, however, in a position to enfilade and counter-batter the principal lines of the front attacked and of the adjoining fronts, and to do serious damage to the enemy in the temporary works thrown up before the siege.

By their united efforts the batteries of the besiegers succeeded in silencing the artillery of the garrison in a very short time. On account of their great distance from the works, however, some of the bombarding batteries constructed early in the siege (Nos. 1, 2, 3, 6, 9, 10, 11, 12) ceased fire in the course of the day.

During the fore and afternoon of the 30th August, the artillery of the garrison, after completing the armament of the front of attack, were able to renew the fight for a couple of hours. Both times, however, they were quickly silenced.

On this day and on the 31st August, the parallels and approaches were first brought to the section necessary for efficiency, and were completed. It became necessary, on this and on the following days, to drive out the French posted in some rifle-pits on Wacken, an island covered with bushes formed by the Aar, a branch of the Ill, and by the Ill.

*September 1.*—During the night between the 31st August and the 1st September the approaches to the second parallel were commenced. They consisted of only a simple trench on the left wing, and three zigzags directed on the capitals of the bastions attacked. In consequence of this the outposts were proportionately

advanced. At the same time batteries Nos. 27 and 28 were built and armed. The enemy displayed great activity during the night, and towards morning commenced a vigorous fire of artillery. The fire was particularly heavy on the north front.

The engineer headquarters were transferred from Mundolsheim to Schiltigheim. The batteries of attack, we may here mention, were placed partly inside and partly outside the parallels and communications. In both cases, however, they were so covered that they were either not at all, or only slightly, visible from the fortress itself. Those for guns were provided for the most part with flat or trough-shaped embrasures.

*September 2.*—During the night of September 1st–2nd, the zigzag approaches to the second parallel were executed, and were made in two separate parts, because it was desired to spare the churchyard of St. Helène, with its monuments. Lieutenant-Colonel von Gayl and Captain Hertzberg, both of the engineers, were killed as they were in the act of endeavouring to improve the defective position of a part of the second parallel, which was too close to the enemy's works. The former was on duty as major of the trenches. The work was not quite completed when, on the night of September 2nd–3rd, about 12 o'clock, a brisk fire of artillery and infantry commenced from the fortress, and was followed immediately by two sorties against both flanks of the parallel. The French advanced with three columns against the right wing in the direction of Vendenheim, and attacked the company of the 2nd Baden grenadiers (King of Prussia's), who were holding the outer buildings of the railway-station. A severe engagement ensued, so that the commandant of the trenches, Colonel von Renz, had to bring up the 1st battalion of the regiment above named, who were on trench-duty, and drive back the enemy, who was superior in numbers, into the fortress. Captain Graeff was killed, and the troops lost 50 killed and wounded, chiefly in retreating into the trenches. The 2nd company distinguished itself very much in this engagement.

In the sortie delivered against the left flank of the parallel at half-past 3 in the morning, the French sent three columns over the islands of Jars and Wacken, where outhouses and plantations afforded much cover, and then fell upon the 2nd battalion of the 30th Prussian regiment, by whom they were repulsed. The loss of the Prussians amounted to one officer (Lieutenant von Versen) wounded and taken prisoner, and thirty men. A French officer and four chasseurs were taken prisoners. In these sorties the want of a greater number of steps over the parapet for counter-attacks was experienced. Rain coming on made the work in the trenches exceedingly heavy. The besiegers had now got so near the fortress that wall-pieces could be used with advantage, for which purpose wall-piece detachments were formed of both Prussian and Baden troops, and were employed to keep up a fire on the enemy's gunners. The French fired for a similar purpose with wall-pieces, chassé-pots, and minié-rifles.

*September 3.*—Extension of parallels, and construction and

completion of batteries 16A, 17A, 19A, 21A, 29, and 30. In the early morning there was a slight engagement at the outposts, in which the besiegers lost eight wounded. In the forenoon there was a cessation of hostilities for an hour, for burying the dead in the fortress.

At Schiltigheim the castle-like monastery was converted into a hospital. Two new kinds of siege ordnance arrived at the park—namely, twelve short-rifled 24-pounders, and two rifled 25-pounder mortars. They threw projectiles of enormous power with great accuracy.

*September 4.*—The engineer headquarters were transferred back again to Mundolsheim for official reasons. Intelligence arrived of the capitulation of Sedan, which was communicated to the governor of the fortress, in order to make him aware of the military and political condition of France resulting from that event. A thanksgiving service was held by the siege corps, and three saluting rounds per gun were fired by the artillery, in honour of the occasion.

*September 5.*—The siege continued its course without any events worthy of remark. During the previous night, as well as in the course of the day, the enemy attacked with small detachments, to interrupt the progress of battery No. 33, the mortar batteries 31 and 32, and the other trench works.

*September 6.*—At Schiltigheim a line of telegraph, serving apparently for communication with Metz, was discovered and destroyed. Subsequently, however, it was believed that it had served for private and local uses. The batteries of the attack kept up a very heavy fire, and the fine 'Finkmatt' barracks, behind the bastion of the same name, where Napoleon III. had made an attempt at insurrection in 1839, were set on fire by shells. In Bischheim, also, a conflagration was caused by the fire of the artillery of the garrison. The Kehl batteries kept up a heavy fire on the citadel and destroyed the city gate there, and by this means the communication with the town and with its defences was rendered exceedingly difficult.

*September 7.*—In the morning there was an engagement of the patrols on the Rhine, in which a detachment of the 3rd (Baden) regiment took part. Another detachment captured at Machern, one-and-a-half leagues above Kehl, two vessels coming from Neu-Breisach with stores for the supply of the artillery, including 30,000 fuzes. The boatmen in charge of the vessels were compelled to discharge their cargoes, on account of the low level of the water in the Rhine, and had set to work to do this without precaution.

*September 8.*—During the past night, battery No. 35 had been armed with two 21-centimetre (8·27-inch) mortars, which was a work of much difficulty, as they weighed nearly 150 cwt.—namely, the piece itself about 66 cwt., and the platform about 84 cwt. These experimental mortars throw a shell weighing 160 pounds, shaped like a sugarloaf, and 20 inches in length, with a 15-pound bursting charge, which forms by its explosion a crater 6 feet deep

and 20 feet across. They are, therefore, very effective against bombproof casemates. They were used in combination with battery No. 5 against the redoubt in lunette No. 44, which work was in consequence soon abandoned by the enemy. At the same time batteries 39 and 38, and two emplacements for field-guns to fire over the ground in front, were built; and a battery (No. 40), for firing at high angles near the churchyard of St. Helène, was constructed, and armed with six 25-pounder mortars.

*September 9.*—The birthday of H.R.H. the Grand Duke of Baden, kept in time of peace with a grand reveille, thanksgiving, and tattoo, was celebrated by an unusually heavy cannonade, on the part of the besiegers, from both sides of the Rhine. Besides the 32 rifled guns and 8 mortars in the Kehl batteries, there were in the principal attack 98 rifled guns and 40 mortars in action. By the admirable arrangement of the artillery attack, for the mutual support and concentration of fire from the various batteries, that of the enemy was almost silenced. It slackened perceptibly, and on the fronts and lines directly attacked, a rapid mortar-fire only was maintained.

In Paris a despatch was published, ostensibly from the governor of the fortress, according to which the condition of the place had in the last few days become very seriously worse, owing to the incessant bombardment; it has not transpired how the despatch in question found its way to Paris under the circumstances then existing.

*September 10.*—During the night of the 9th–10th, work was begun in three places at the communications to the third parallel, and a sortie of the French from the porte Nationale was repulsed by the 2nd (Baden) regiment. The use of the Stein Thor (porte de la Pierre), which lay so close to the attack, was rendered altogether unavailable for making sorties, because it, as well as the bridges at that place, had been entirely destroyed by the fire of the artillery. In the town several large conflagrations were observed.

*September 11.*—During the preceding night the approaches to the third parallel, on the three openings that had been made, were pushed forward about 300 paces. The artillery fire on both sides was heavy. There was a fire at the artillery school, and also in Königshofen. Breaching battery No. 8 was constructed against lunette No. 53, and was armed with four short 24-pounders.

*September 12.*—During the previous night the third parallel was added, 700 paces in length, which was executed by means of the common sap,\* without using gabions, as had been all the earlier works of this description. It deserves to be prominently noticed that the establishment of the third parallel and the communications between the second and third parallels by the common sap, instead of the full sap prescribed for their execution in the regulations, shortened the attack by many days; and this

\* The 'common sap' is not what is so called in the English Service, but the mode of execution adopted by us for the first parallel.

arrangement, previously unrecorded in military history, was due entirely to the Engineer-in-Chief, General von Mertens. The garrison attempted a sortie, which produced no effect, and was of no importance. At the same time battery 8A was constructed; and armed with four 50-pounder mortars, against bastion No. 11, on the front of attack, which was also shelled by battery 35. At break of day the fire of the artillery was resumed, and kept up most vigorously. The position of the third parallel was such that it skirted the foot of the glacis of lunette 53, while it was some 60 paces distant from the foot of lunette 52. A kind of demi-parallel was required to connect the two glacis, at their feet, for which purpose a sap had to be driven forward from the third parallel towards lunette 52. Further approaches could no longer be made by zigzags. The double sap (*Traversensappe*) was necessary to give the additional cover required on both sides. Breaching battery No. 42 was erected, for six short 24-pounders, against the right face of bastion No. 11.

The Swiss, with the consent of the governor of the fortress, and of the commander of the siege corps, made arrangements for the departure of distressed families. Nearly 800 persons left the fortress, with the greatest goodwill on the part of the besiegers.

*September 13.*—During the previous bright moonlight night, the work at the double sap was continued with sap-rollers (*Erdwalze*). The fire of the fortress reached as far as Mittelhausbergen, more than a league (about 4,600 yards) from the place, and set that village on fire. In the course of the day an exchange was effected of an unwounded French officer, who was a prisoner, for a wounded Prussian officer, who was also a prisoner—Lieutenant von Versen, of the 30th regiment. Detachments of Baden infantry occupied the island of Sporen, at the south-east of the fortress; they made rifle-pits there, and endeavoured to establish communication with the Prussian troops posted at their right on the Roberstaue, for which purpose a bridge was thrown over the branch of the Rhine.

*September 14.*—On the night of September 13th–14th the demi-parallel was completed, and was broken through for a return to the front; this could only be made by a double sap, executed by means of sap-rollers. At the same time batteries 41 and 43 were built, and manned by the Würtemberg artillery. The former was armed with four 12-pounders, and the latter with eight 24-pounders, for firing against the adjoining fronts. Then followed the establishment of mortar-emplacements Nos. 45 and 46, against the outworks lying near them, as well as the construction of 'dismounting battery' No. 44. An indirect breaching battery, No. 42, was built to operate against the right face of bastion 11, and armed with four short 24-pounders. A detachment of Baden troops, consisting of 4 battalions, 8 squadrons, and 3 batteries, under the command of General Keller, was sent from the siege corps to Upper Alsace. It marched by Colmar to Mühlhausen, was attacked by the garrison of Neu-Breisach and some gardes mobiles, and, in compliance with orders, effected the disarmament of the district, in which signs of a popular rising had appeared.



*September 15.*—During the previous night the glacis was crowned by the flying sap for 50 paces along each face of lunette No. 53. A second time the French made an attempt to occupy the island of Sporen in force. This day they endeavoured to effect this object by a sortie in force, apparently with 1,600 men, accompanied by artillery, who, after a combat of some duration, were driven back.

At first there were only two Baden companies opposed to the French, but these, during the fight, were reinforced by Prussian detachments, and drove back the enemy, who left behind them killed, wounded, and prisoners.

In Strasburg the want of provisions, especially among the poorer classes of the population, began to be felt seriously, and arrangements were made for sheltering those whose houses had been burnt in sheds built for horses. At the pressing instance of the clergy of both persuasions there was an armistice from 9 till 12 in the forenoon, to allow 500 or 600 women and children to depart from the besieged city.

*September 16.*—On the night of the 15th–16th the crowning of the glacis, by flying sap, in front of lunette 52, was begun. At Appenweier, a railway-station, 2 miles ( $9\frac{1}{2}$  English miles) from Kehl, preparations were made for the repair of the lattice-bridge over the Rhine, which had been destroyed, restoring it, in the first instance, for one line only. The flying-bridge at Ichenheim, about  $2\frac{1}{2}$  leagues above Kehl, was also kept ready to be brought down to that place.

*September 17.*—On this night the crownings in front of lunettes 52 and 53 were prepared for action, and the artillery displayed, on this occasion, extraordinary activity. Batteries 17A, 19A, 21A were made in front of the second parallel, and Nos. 17B, 19B, 21B were made in connection with them. Batteries Nos. 46, 47, 48, 5A (all batteries for firing at high angles) were built, and armed with light and heavy mortars. Captain Ledebur, of the Engineers, with two resolute pioneers (sappers), had on the night of the 8th–9th September reconnoitred lunette 53. Letting themselves down by ropes into the ditch, they discovered three mining-galleries of the enemy, of which the entrances were just above the surface of the water in the ditch. One principal gallery was found on the centre line of the work, and one gallery on each side of it. All three were connected by parallel galleries, and formed in the customary manner. This system of mines being discovered, was given up by the enemy. Only one mine had been loaded, and that was now unloaded. The gallery, on the right of the capital, was converted by working from the third parallel into an underground communication with the ditch of the work, and by the 14th September was made use of as a secure place of observation for watching the effect of the indirect breaching batteries on the right face. Information was thus obtained that the breach was quite practicable on the 16th September. This was not the only application of indirect fire to the formation of a breach, for it had, as we have seen, been attended by the best re-

sults from battery 33, against the redoubt of lunette 44, and against a covered dam at the Fischerthor, between bastion 15 and ravelin 63.

In the evening detachments of the 3rd and 6th regiments of Baden infantry repulsed an attack attempted by the French on the island of Sporen.

*September 18.*—On the previous night the fortress was bombarded with increased vigour. An advance was made into the covered way of lunette 52, and the redoubt in the *place d'armes* was found to be abandoned by the enemy. The descent into the ditch in front of lunette 53 was excavated during the night, and at intervals by day, and the timber-work was then commenced. The field telegraph was brought up to the third parallel, and the whole of the siege-works put in connection with it. This was its first application in siege operations.

*September 19.*—In the night progress was made with the construction of the descent into the ditch in front of lunette 52.

Lieutenant Kirchgessner, of the engineers of the Grand Duchy of Baden, was killed. The theatre in Strasburg became a prey to the flames. The bombardment reached all parts of the city, and destroyed a timber-yard in the citadel, and two of the largest and finest houses on the Steinstrasse, by fire. Immediately on completion of the crownings in front of the two lunettes, the artillery went on with the construction of counter-batteries, Nos. 51, 53, 54, and armed them each with two 6-pounder guns.

*September 20.*—In front of lunette 53 the descent of the ditch was finished, and the foot of the counterscarp was blown in by a mine. The breach thus caused was widened to 12 feet, and made practicable. The *débris* of the wall, however, only filled up part of the ditch, and about 3 rods (36 feet) of its breadth remained to be filled up to complete the passage of the ditch. This was done by throwing in filled sandbags and earth, and fascines and gabions loaded with stones. Towards 5 p.m. this task was completed, and a passage to the work was made practicable, about 60 feet long, 18 feet wide, and 4 feet to 8 feet deep in water. Accordingly, the guard of the trenches that happened to be at hand, consisting of some men of the Cottbus landwehr battalion of the guard, under Lieutenant von Müller, of the fusiliers of the guard, advanced, ascended the breach that had been made in the 18-foot escarp, and effected a lodgment on it. The work was abandoned by the enemy, but the interior was seen from the works lying behind it. Lieutenant Frobenius, of the engineers, reconnoitred the interior of the lunette. He found the gorge open, a great traverse, with two vaulted passages, erected on the centre line or capital of the work, and some guns. The abandoned guns were spiked by the artillery; and the pioneers (engineers) having found nowhere any mines for its demolition, the interior of the lunette was occupied. The enemy hereupon opened a brisk musketry fire, from which the new garrison endeavoured to cover themselves as best they could. At night the 3rd company of the 34th fusiliers formed the garrison. A pioneer company, under

the command of Captain Ledebur, effectually closed in the work by the construction of covered communications to the lodgment in the gorge, with a parapet facing the enceinte. Mortar-batteries 49 and 50, against the adjoining works, as well as gun-battery 55, were built. In the captured lunette, No. 53, a 7-pounder mortar-battery, No. 56, was erected.

*September 21.*—General Keller's detachment, that had been sent to Upper Alsace, rejoined the siege corps before Strasburg. Night and day work was carried on at the descent of the ditch in front of lunette 52, from the entrance down to the bottom, and many reliefs were employed, so as to finish the work as quickly as possible. The slopes were revetted with gabions, and iron rails, properly supported at the ends, were used in its construction. The breach through the earthen counterscarp to the wet ditch was filled up during the day with gabions, sandbags, &c. At 8 o'clock in the evening preparations were commenced for the passage of the ditch. This was to be effected by means of a bridge of casks, 120 feet long, constructed under the charge of Captain Andriae, of the engineers. To prevent noise the bridge was covered with straw, and its construction was completed about half-past 10 o'clock. A working party of 100 men, under the command of First-Lieutenant von Keiser I., of the engineers, followed by two companies of the 34th fusiliers, crossed over, and found the lunette armed with some guns, but unoccupied. Fire was opened upon them, however, from the line of works in rear, namely, the counterguard, and the hornwork 47-49; but, though they suffered much loss, the work was pushed on with great energy, and the contemplated lodgment in the works was effected. Major von Quitzow, of the staff of the engineers (major of the trenches on duty), was killed. Captain Roesse, of the engineers, had charge of the works for closing the lunette, which consisted of a lodgment behind the palisades at the gorge, and a communication leading into it. Inside the lunette four 7-pounder mortars were subsequently placed, and it was called battery 57. The loss amounted on this night to 10 killed and 38 wounded. During the day the bombardment was extended to all parts of the town. The prefecture was burnt down, and the fire in the Steinstrasse continued its ravages.

*September 22.*—During the past night the cannonade never stopped, and the bursting of shells in the city was incessant, causing much loss of life, and making everywhere sad havoc.

Lunette 52 was captured; with it six 12-pounders, with their proportion of ammunition, fell into the hands of the besiegers. On the crowning a 6-pounder was placed opposite the left face of the work. The losses of the last few days had made it necessary to advance the field hospitals (*Verband plätze*). They were made bombproof by the use of railway metals, and for some of them Abyssinian wells were sunk.

*September 23.*—During the past night the besiegers, making use of a dam that happened to be there, debouched from the gorge of lunette 52, by means of the double sap, towards the

summit of the glacis of counterguard 51. At this point Captain Ledebur, of the Prussian Engineers, was wounded; he died of this wound some weeks later. All honour and respect is due to this officer for his gallant conduct. He it was who, by a bold advance, discovered the mines in front of lunette 53, and who swam through the ditch in front of lunette 52 to reconnoitre the gorge of that work.

On the same night a powder-magazine, which had been struck simultaneously by two French shells, blew up in battery No. 35. In another battery (No. 32,) the roof of the magazine was broken through. In the former case 5 cwt. of powder went off, and blew to pieces the gunner who was employed in the magazine. It was evident from this, that the bridge of casks leading to lunette 52, built on the night of the 21st and 22nd, would not last long. In the course of the day it was disabled by the shells of the enemy. It was accordingly sunk on the following night to the bottom of the ditch, filled up with fascines, sandbags, and gabions, and remained thus a secure means of crossing the ditch. As it was exposed to an uninterrupted flanking fire from lunettes 54 and 55, a parapet was made on the left side, of gabions in two rows, one above the other, filled with sandbags. Breaching battery No. 42 commenced firing against the right face of bastion 11.

*September 24.*—During the previous night, breaching battery No. 58, for four short 24-pounders, was built opposite the left face of bastion 12, and opened fire in the morning. The double sap, which had been commenced inside the dam leading to lunette 52 from the rear, was pushed forward as far as the crest of the glacis of bastion 11, where it terminated in a traverse that was met with, and which was prepared for defence by infantry, by cutting a banquette in it. Destruction by fire and ruin of every description continually increased in the city; the citizens were wounded and killed, by shrapnel and shells, in the streets, in their houses, at any business they undertook. One of the 21-centimetre (8·27-inch) shells passed through three storeys into the cellar of a house, destroying everything in its way.

*September 25.*—In lunette 53, battery No. 60 was erected, for three rifled 6-pounders. A complete breach was formed in bastion 11.

*September 26.*—A complete breach was formed in bastion No. 12. Bastions 11 and 12 were reduced to shapeless ruins by the fire directed on them, and at the salient of the latter bastion an arched gun-casemate was entirely destroyed. The arch of the Steinthor was shot to pieces. The construction of the crowning in front of the counterguard of bastion 11 was continued by the engineers.

So remarkable were the exertions of the artillery, that it is only right to make special mention of the energy and endurance which these troops this day displayed before Strasburg, and to which alone it is due, not only that the artillery of the defenders was so held in check, that at last they only ventured to come out at night,

but also that the engineer attack, conducted with measures as well considered as they were excellent and vigorous, attained its object in so short a time.

The various descriptions of guns which the artillery had in use before Strasburg were long 24-pounder, short 24-pounder, 12-pounder and 6-pounder guns; 21-centimetre, 50-pounder, 25-pounder, and 7-pounder mortars. Altogether 193,722 shot and shell were fired, of which 162,600 were fired from 197 Prussian pieces of artillery, and 31,112 from Baden artillery. Every day a train of thirty-two wagons was required to bring up ammunition. During the bombardment and the siege, on the average 1,200 cwt. of metal (iron and lead) was thrown into the fortress daily. At the time that most of the artillery were in action—that is to say, approximately, during the last three weeks of the siege—the fortress received, at the ordinary rate of fire, some 6,000 projectiles during the 24 hours, and of these each one exploded separately. Wall-pieces, served by some particularly good marksmen of the Baden division, were made use of from the beginning of the siege. Wall-piece detachments were formed, and posted in the most advanced trenches, in order that they might operate against particular guns of the enemy.

*September 27.*—On this day the defence was almost entirely silent, and only now and then gave signs of life. But, though this was the case, all were surprised and astonished when, at 5 o'clock in the afternoon, white flags were seen to wave on the cathedral, and on bastions 11 and 12. At the same time, a flag of truce announced that the governor wished to treat for the surrender of the fortress.

*September 28.*—At 2 A.M. the terms of capitulation were agreed upon at Königshofen, and the principal points were as follows:—

“Article 1.—At 8 A.M. on the 28th September, 1870, Lieutenant-General Uhrich evacuates the citadel, the Austerlitz, Fischer, and National gates. At the same time the German troops occupy these places.

“Article 2.—At 11 o'clock on the same day the French garrison, including mobiles and national guards, evacuate the fortress and lay down their arms.

“Article 3.—The troops of the line and gardes mobiles become prisoners of war, and march off with their baggage. The national guards and the franc-tireurs are free on specified conditions, and give up their arms at the mayoralty.

“Article 4.—The officers and officials ranking as non-commissioned officers depart to such residences as they may select, on a written engagement ‘upon honour.’ Those who do not do so, go with the garrison as prisoners of war to Germany.

“Article 5.—Lieutenant-General Uhrich undertakes, immediately after the arms are laid down, to hand over all military property, and the public chest.”

This capitulation was signed, on the part of the Germans, by Lieutenant-Colonel von Lescinsky, chief of the general staff,

and Captain and Adjutant Count Henckel von Donnersmarck; and on the part of the French by the commandant of Strasburg, Colonel Ducasse, and by Lieutenant-Colonel Mangin, sub-director of artillery. It was ratified by Lieutenant-General von Werder.

The Germans received into their hands, in consequence of this capitulation, 461 officers, 17,111 men (including 7,000 national guards), and some 2,000 sick, 1,843 horses, more than 1,200 pieces of bronze ordnance, 3,000 cwt. of powder, 12,000 chassepot rifles, 50 locomotives, and great quantities of other warlike stores. The prisoners of war were sent to Rastatt.

In accordance with Article 2 of the capitulation, detachments of the siege corps of all arms were posted during the morning between the roads leading to Zabern and to Königshofen, while the French marched out between lunette 44 and redoubt 37. The march-past of the latter was commenced by Lieutenant-General Uhrich, followed by General Barral, of the artillery, and Admiral Exelmann, who was to have commanded the Rhine flotilla. The troops marched at first in their ranks, but afterwards in disorder. They defiled past Lieutenant-General von Werder, in the presence of H.R.H. the Grand Duke of Baden.

In Strasburg both Lieutenant-General Uhrich and the prefect had issued proclamations to the citizens, in which they expressed their sympathy with the hard lot of the inhabitants during the siege, and their confidence that they would accept the new state of affairs worthily and peaceably.

*September 29.*—The taking over of the property, barracks, &c. continued. The communications destroyed were repaired and opened, especially the bridges and gateways of the fortress.

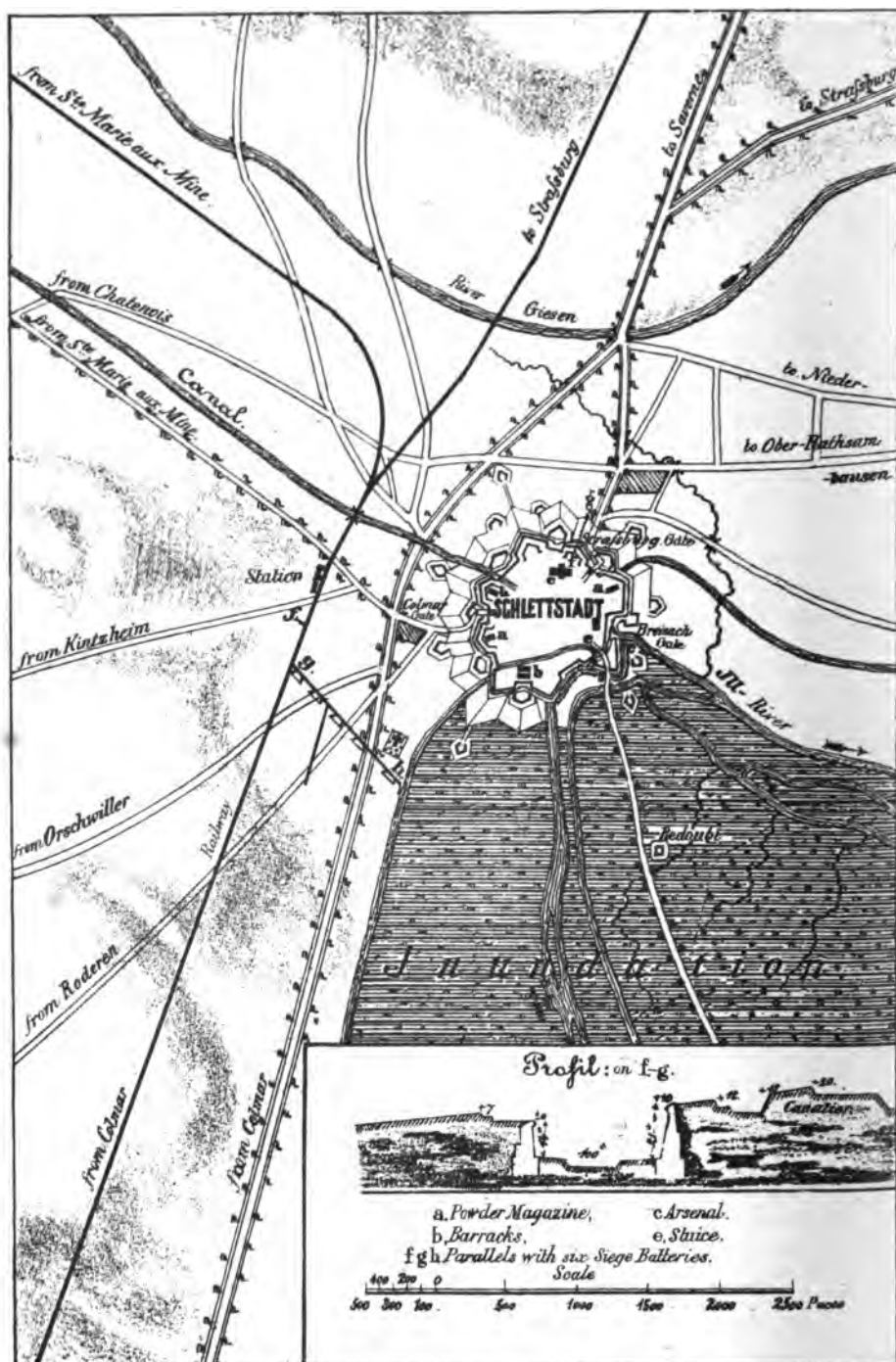
*September 30.*—being the birthday of Her Majesty the Queen, and a day to be remembered after the occupation of Strasburg for 200 years by the French troops—the entry of the siege army corps took place, with Lieutenant-General von Werder at its head. This event was celebrated by a thanksgiving service in the church of St. Thomas. The siege cost the garrison some 2,000 men killed and wounded, the civil population some 400 or 500 persons; and the besieging army 43 officers, and 863 men killed and wounded.

Without making any imputation on the military honour of the brave and worthy governor, but looking at the matter in a purely military aspect, it is a fact that the time for capitulation had not arrived. More light will probably be thrown on this point hereafter. The want of discipline was no doubt one cause of disaster for the defence, but it is nevertheless certain that even a better garrison could not have held out much longer. For to remain on the ramparts under the incessant cannonade was almost impossible; a breach had been effected, the citadel was almost destroyed, the entrance gateway of the city was shot to pieces. Under these circumstances, and as there was no flanking fire along the bottom of the ditches, an attempt to storm the fortress was almost sure of success. The capitulation, at all events, had the effect of preventing one or more assaults, which would have

entailed more bloodshed and serious loss of life. The capture of Strasburg was of decided military importance for the prosecution of the war, but it was of far greater moment politically. *The German city of Strasburg had surrendered to us, had again become German, and would, it was hoped, long remain so.* In a few years the city, heavily though it suffered by the war—for its losses have been publicly estimated to amount to 50,800,000 francs (£2,032,000)—will flourish again, and its wounds, which we inflicted with heavy hearts, will be healed.







## SCHLETTSTADT.

(PLATE VIII.)

SCHLETTSTADT, a fortress of the second class—which indicates, however, only its present relative position—is situated on the Ill, not far from the small affluent the Giesen, and consists of eight tolerably regular bastions, constructed on Vauban's principles in 1673. Most of the bastions are provided with ravelins of the form of small lunettes. Nine similar works are placed in the re-entering angles at the foot of the glacis, and of these one on the north and one on the south front respectively, are advanced farther into the country. These works are obviously intended to bring the ground in front under a cross-fire, and to keep the works of a besieger at a distance from the enceinte, for which purpose they have been constructed with a low profile, so that their fire may be as grazing as possible. There are no other outworks, except a redoubt raised in the inundated ground to the south of the fortress. Most of the bastions have orillons to protect the retired flanks, and some of them have cavaliers seeing far over the country. The curtains are broken. The fortress contains three powder-magazines, an arsenal, and several barracks. The last-named buildings are not bombproof. Three gates, each covered by one of the ravelins, lead respectively to Colmar, Strasburg, and Neu-Breisach. The important highroad from Strasburg to Colmar passes by the fortress, 300 paces to the westward; 400 paces farther to the west is the railroad between Belfort, Basle, and Strasburg. The Ill, always full of water, can be made use of, by means of a well-protected sluice near the Gate of Breisach, for inundating the ground to the south of the fortress, which is partly meadow-land and partly marsh. Several branches of the stream are also available for this purpose. At the same time part of the ditches of the fortress can be supplied with water.

The strategic object of Schlettstadt is to command the railway leading to Belfort and Besançon, the highroad already mentioned, at the mouth of the populous and industrious Vosges valley of St. Marie-aux-Mines, through which pass the railway and road to Luneville. During the war it served for the numerous bands of franc-tireurs, who hung about Upper Alsace, as a place of assembly, of which it was necessary to deprive them. The passage of the Vosges here had the advantage that it was never closed by snowdrifts, as happens frequently with most of the mountain-passes thereabouts.

It will be remembered, that on the 14th September a detach-

ment, composed of troops of the Grand Duchy of Baden—consisting of four battalions, eight squadrons, three batteries, and a pioneer detachment—under the command of General Keller, was ordered from the Strasburg siege corps to disarm Upper Alsace, disperse the franc-tireurs, and prevent the organisation of a popular war in that quarter. A detachment of Baden troops, with the same objects, had in the beginning of September already won a victory at Markirch. This mission led also to a reconnaissance being undertaken against Schlettstadt, and in this way trustworthy information was obtained with regard to the garrison and the state of preparation of the fortress. The preparations were fully completed; the rayon was clear of cover, and the glacis of timber, while the country round was placed under water. The conviction was arrived at, that the fortress was not to be taken by a sudden attack, and it was thought sufficient at the time to break the telegraphic communication with Colmar, and to destroy the railway by blowing up some bridges. The fortress was also observed more completely than before, and was occasionally shelled with field-guns, after an unavailing demand to surrender had been made to the commandant (Count von Reinach), on the strength of the events that had taken place at Sedan.

Meanwhile in the neighbourhood of Freiburg, in Breisgau, on the right (the German) bank of the Rhine, the formation of the 4th Prussian reserve division, under the command of Major-General von Schmeling, had been completed. It received orders, accordingly, to commence its military career with the capture of the fortresses of Schlettstadt and Neu-Breisach. For this end the division crossed the Rhine, on the 1st and 2nd October, at Neuenburg, five leagues above Neu-Breisach, by means of ferry-boats, which had been in preparation for some time previously, in consequence of the resistance of the French population in that quarter.

In this state of affairs orders were given to invest Neu-Breisach at the same time. Action was chiefly, however, taken against Schlettstadt, as it was convenient to have the rear free, and to have direct communication with Strasburg, which was necessary in order to draw from thence siege-matériel of all descriptions, and especially heavy siege-guns.

That part of the 4th reserve division which was told off for the closer investment of the fortress of Schlettstadt, consisted of battalions of the 1st, 3rd, 4th, 5th, 43rd, and 45th landwehr regiments, the 25th (1st Rhenish) regiment (which had just arrived from Schleswig, and was attached to the division), of two reserve field-batteries, and of one squadron each of the 1st East Prussian and the 3rd reserve ulan regiments. These troops, on the 9th October, went into cantonments close round the fortress. After the Commandant of the fortress had rejected, offhand, the demand to surrender, with the words "*mes conditions seront les canons*," steps were at once taken for bringing from Strasburg the necessary materials for the siege—guns, brushwood, &c.—and the siege detachment was reinforced by the 11th garrison company of artillery,

and four garrison pioneer companies—viz., two Prussian and one Bavarian company, and one company of the Grand Duchy of Baden. The siege artillery was placed under the command of Lieutenant-Colonel von Scheliha, and Lieutenant-Colonel Sander, of the engineer staff, directed the works of the siege.

On the night of the 19th–20th October a battery was constructed against the east front of the fortress, on the other side of the inundated ground, and was armed with four rifled 12-pounders. This battery opened fire on the morning of the 20th October, and had to maintain a fight alone, for three days, against nine guns of the fortress.

The south-west front was selected for the attack, because the ground there was beyond the limits of the inundation, and was such that the trenches might be expected to be dry. The latter was an advantage not to be despised. Headquarters during the bombardment were in Kühnheim.

On the night of the 22nd–23rd October, the first parallel, with communications to the rear, was thrown up by the common sap\* opposite the south-west front. It was at a distance of only 700 paces from the fortress, and though it was so close, and the night was clear and quiet, it was not observed by the enemy. This shows how poorly they did their duty, for they seem to have altogether omitted to send out night-patrols over the ground in front of the works. The trench-work was commenced as night fell, and was very difficult, on account of the rocky nature of the soil; the few shells and case, which towards morning were fired from the fortress, went much too far, and occasioned the loss of only three men. At the same time that these trenches were put in hand, the construction of six separate siege-batteries was commenced; and on the morning of the 23rd they were armed with 44 guns in all—namely, 12 rifled 24-pounders, 20 rifled 12-pounders, and 12 heavy mortars—and forthwith opened fire. The fire was directed chiefly against the gates within reach, the works, and the military buildings. Unavoidably, however, some of the townspeople's houses were also set in flames. The artillery of the garrison brought into action some 30 guns. The activity which they displayed in replacing the numerous guns that were dismounted, and in adding to and altering the emplacements for guns, deserves recognition. However, the injuries done by the siege-batteries to the guns of the garrison were considerable, and it was barely possible for them to remain on the ramparts. The Colmar gate, with its drawbridges, was shot to pieces. Under these circumstances it was not surprising that the fire of the garrison should gradually slacken, while the besiegers, on the night of the 23rd–24th October, kept up theirs successfully, and with ever-increasing effect.

On the 24th October, about 9 A.M., the French hung out the white flag on the cathedral and on some of the works, and in consequence Major von Kretschman, of the general staff, was sent into the fortress, to commence negotiations for a surrender. The governor desired an armistice for 24 hours, which was, however,

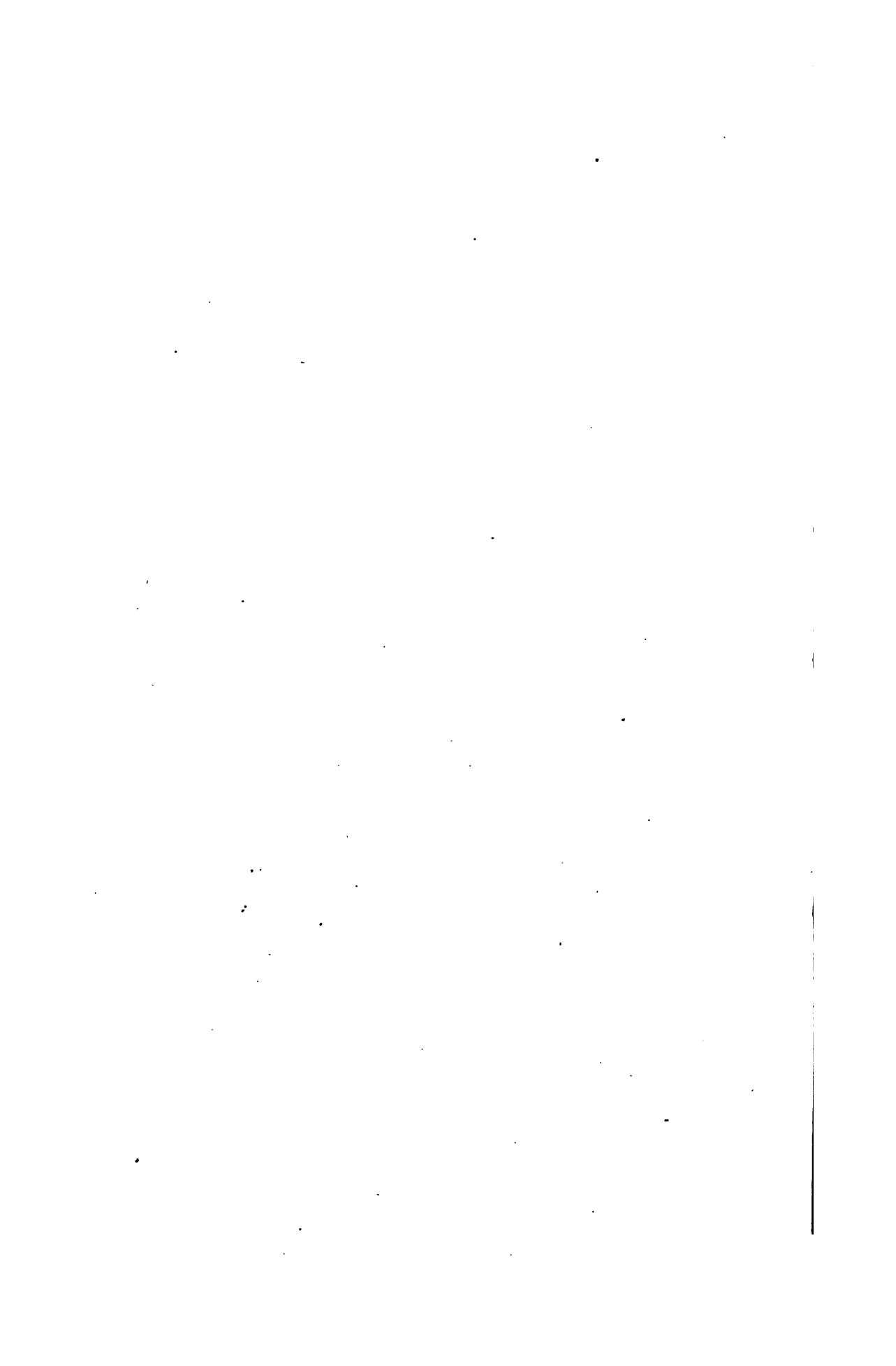
\* See note p. 46.

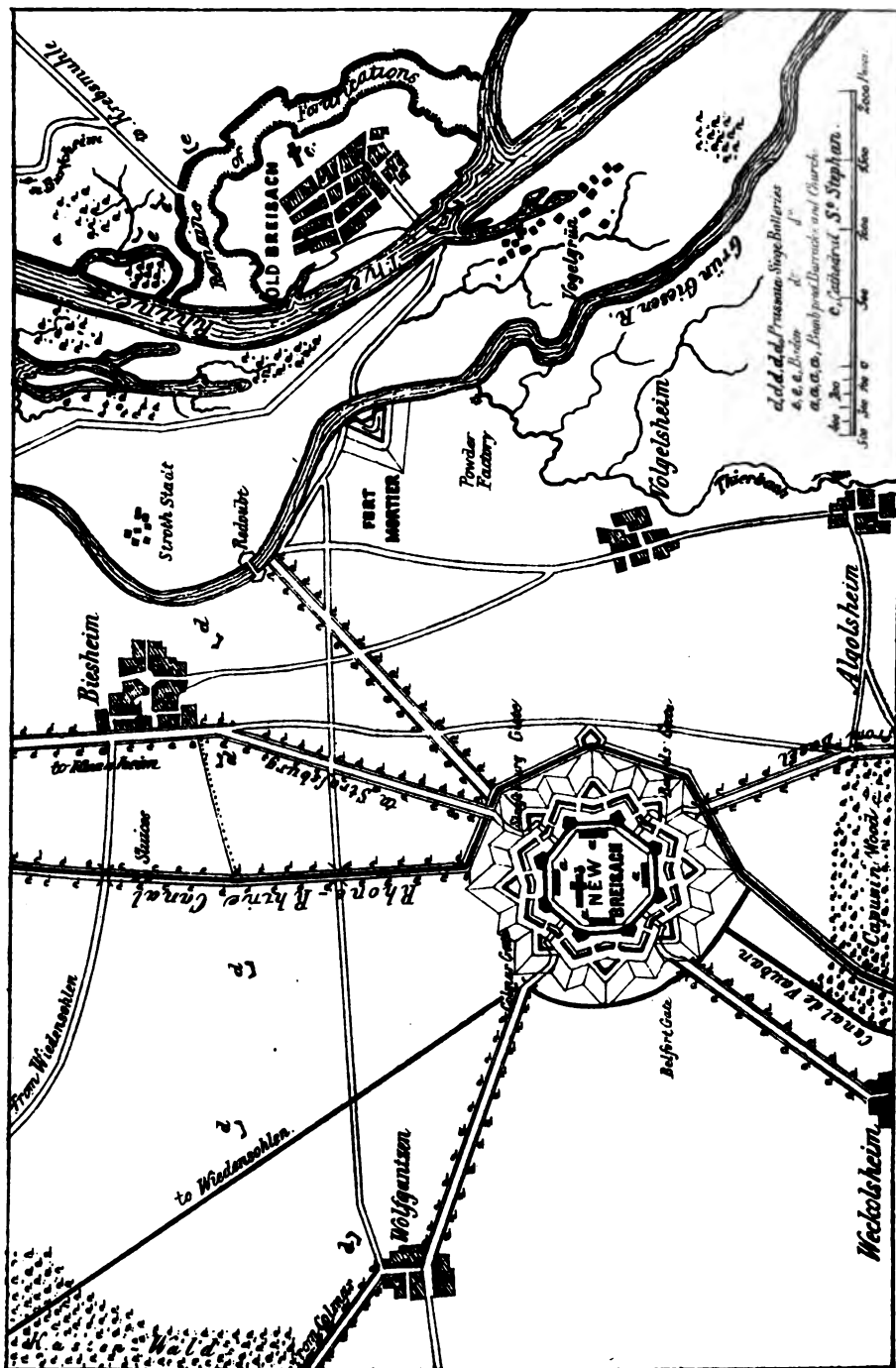
only granted to him until 2.30 in the afternoon. There is no doubt that the state of affairs in the fortress materially hastened the conclusion of a capitulation. In consequence of the damage by fire caused by the siege-batteries, as mentioned above, to the buildings of the town, the townspeople were urgent for a surrender; but of still more importance was the demoralised condition of the garrison, among whom there was no longer any discipline. The want of trained artillerymen, who were scarcely sufficient for two reliefs, and (as at Strasburg) the entire absence of any detachment of engineers, were undoubtedly most disadvantageous to the defence. Soldierlike spirit and military discipline had been alike irrecoverably lost ever since the place had been first invested. It could not otherwise have happened that a detachment of 300 *gardes mobiles*, who had been sent on a reconnaissance to some distance from the fortress, never came back again, but preferred to go home, and there willingly allowed themselves to be disarmed by some Baden troops, without offering any resistance. In fact, on the day of the capitulation, the garrison were for the most part drunk, and employed in pillaging, and had thrown off all discipline. Some of them actually set fire to private houses, and went about with the intention of blowing up the powder-magazines.

While the French officers were endeavouring to prevent this, the governor thought proper, contrary to his instructions and to the custom of war, to leave the fortress, and continue the negotiations outside the gates within range of the besiegers' forces, and under these circumstances brought them, at any rate, to a rapid conclusion. The capitulation was not even ratified by the general in command, but, as a precaution against greater mishaps, three Prussian battalions marched into the fortress, to prevent further excesses of the French garrison, and chiefly to protect the threatened powder-magazines, which were pointed out in detail by Colonel Pinot, commanding the artillery. About 3 o'clock in the afternoon the capitulation was concluded, and an hour later the fortress was evacuated by the garrison of 100 officers and 2,000 men of the different arms, including *gardes mobiles*, who were made prisoners of war. In consequence of an order proceeding from headquarters, the officers did not, as in previous capitulations, have the option granted to them of going away free on parole. The booty consisted chiefly of 122 garrison guns, 50 of them rifled—of which 116 were mounted on the ramparts, but 24 had been dismounted—besides considerable stocks of tobacco, provisions, and stores of other descriptions.

The damages done to private property by the bombardment were estimated at 2,500,000 francs (£100,000).

On the 25th October, Major-General von Schmeling made his entry into the fortress. The occasion was celebrated by ringing the bells, and by holding an evangelical and catholic thanksgiving service.





## NEU-BREISACH.

(PLATE IX.)

NEU-BREISACH was at one time a model fortress of Marshal Vauban, and is built according to his third system. It consists of a regular bastioned octagon, at the salients of which bastion-shaped towers have been erected. The ditches are dry, and swept by the fire of sunken works in front of the curtains, called 'tenailles', while the masonry of the bastions is protected from direct fire by large outworks or counterguards. In front of the eight tenailles are situated the same number of very spacious ravelins, which are thus placed, both to fire, generally, over the ground in front, and also to give a cross-fire over the space in front of the bastions. The roads to Colmar, Strasburg, Basle, and Belfort pass through the ravelins, so that the entrances, and the lines of the roads, are thoroughly swept by the fire of the guns. There are no outworks anywhere, except a small lunette built close to the foot of the glacis in front of the east face, and intended to flank the Rhone-Rhine canal. Fort Mortier, which played an important part in the bombardment of the place, lies about 2,000 paces from the fortress, towards which it faces. It serves apparently as a bridge-head, and is supported on the defences of Alt-Breisach, which have long since fallen into ruins. As it was situated on the French bank of the river, and could be advantageously made use of for the defence of the ground between Neu-Breisach and the Rhine, and also to command the island there, which, with a flying-bridge, formed a means of communication with Alt-Breisach, it had, in spite of its advanced position, been maintained as a means of strengthening the fortress, and had been made securely defensible, by the addition of a suitable gorge, in the form of a bastioned front, on the side towards Germany. The fortress had ample casemated buildings and well-protected powder-magazines. More recently, its defensive strength had been increased by the construction of earthen traverses, and of shelter-casemates on the rampart, to afford cover for the guard of the ramparts and the men serving the guns.

The Rhone-Rhine canal flows through the ground in front of the fortress, circles round the east front, and is of some use for the defence. A second canal, the canal de Vauban, flows round the west of the fortress, and connects the Ill with the Rhine-Rhone canal. The ground in front lies low everywhere, and is protected on the east by the banks of the Rhine, which are clothed with willow plantations, and by the numerous islands, and on the west by the Kasten Wald. The surrounding country is divided, for defensive purposes,



into several sections by the features of the ground. The town, being purely a military fortress, is very regularly built, and exclusively of one-storied houses. It has only 3,500 inhabitants, most of them employed in the timber trade. Neu-Breisach had never before been besieged.

The occupation of Neu-Breisach was necessary for the German forces, because the fortress bars the roads leading by Colmar, which is only a few miles distant, to Luneville, and also the Rhine-Rhone canal, and because, by its capture, the last stronghold in Upper Alsace—from which, moreover, operations could have been undertaken against the Baden Oberland—would be wrested from the French.

The constant good fortune which had attended the German arms since the beginning of the campaign had produced an extreme feeling of exasperation among the population of Upper Alsace, who, already prejudiced against everything German, had hitherto been spared the horrors of war. This feeling had especially taken root in the great manufacturing towns, Colmar and Mühlhausen, and had been cherished by every means available. Circumstances necessitated the closing of a great many of the manufactories. Terrorism was the result, and many thousand workmen, thus deprived of their daily bread, were placed in a most precarious position. It suited the purpose of the authorities to give to the public feeling a purely political colouring, in order to organise thoroughly a popular war, and for this purpose to make use of Neu-Breisach as a central rallying-point for the movement. Partly on these accounts, and also to obtain more detailed information concerning the fortresses of Schlettstadt, and especially Neu-Breisach, which were then coming into notice, small reconnoitring parties were sent out at the beginning of September, both from the force investing Strasburg, and from the German troops stationed in the Baden Oberland, who crossed the Rhine for the purpose. Finally, on the 14th September, Baden patrols pushed their way close up to Breisach, and showed themselves in Arzenheim and Biesheim, to the north of the fortress, after crossing the Rhine between Diebolsheim and Kappel. In consequence of this, the bridge which crosses the Rhine at the custom-house, was blown up with gunpowder by the garrison of Breisach.

As has been already mentioned, in speaking of Strasburg and Schlettstadt, a detachment of the troops of the Grand Duchy of Baden, under the command of General Keller, marched on the same day from the circle of investment of Strasburg for Upper Alsace, and with this object in view arrived on the 15th September at Colmar, on the 16th at Mühlhausen. On arriving at Colmar, they received exact intelligence that the commandant of Neu-Breisach was aware of this expedition, and would oppose General Keller's advance. To prevent this being done, an attempt was made on the part of the Germans to find the enemy, and in consequence a squadron of the 2nd regiment of Baden dragoons and the fusilier battalion of the 5th Baden regiment almost

immediately came into contact with them. On the 15th this flanking column, which was intended to cover the further advance to Colmar, was involved in an engagement with the enemy, south of Künheim. The latter consisted of a party of gardes mobiles and a detachment of cavalry from the fortress, into which they were at once driven back. The Baden troops suffered only the small loss of two men and five horses, but that of the French was far more considerable. In this encounter Second-Lieutenant Maier was taken prisoner, but immediately rescued again by his dragoons.

While Breisach was observed by a small party of Baden troops, the main body of General Keller's detachment was performing the duty with which it had been charged. It occupied Colmar, Mühlhausen, and Cernay, hunted down the French bands of franc-tireurs, disarmed the communes, and started upon its return to Strasburg, after drawing in the detachment which had been left before Breisach. The commandant of the fortress took advantage of the opportunity to seize at Munzenheim, on the 19th September, a convoy of arms, which was on its way, under an escort of thirty men, from Mühlhausen for the Baden troops. General Keller's detachment arrived before Strasburg again on the 20th September, and soon after its return the gardes mobiles in Colmar and Mühlhausen once more took up arms. A party of French troops of the line, coming from Belfort, occupied Mühlhausen; the garrison of Breisach was reinforced by some gardes mobiles, and scoured the country round, especially the banks of the Rhine, with numerous patrols. The French gardes mobiles and franc-tireurs appeared again in many places on the Upper Rhine, and now, as before, spread disorder around. It seemed as if the expedition of General Keller had been premature, as at that time they were not ordered to occupy permanently the district in question; for this purpose the detachment was too weak.

In order to put an end to these French republican movements in Upper Alsace, and especially to cut them off from Neu-Breisach, which served as a rallying point for these operations, in the beginning of October detachments of the 4th Prussian reserve division, then in course of formation, were sent across the Rhine from Breisgau to invest the fortress.

On the 5th October, towards evening, the French, about 2,000 strong, made a sortie, which was vigorously repulsed by three companies of the 43rd landwehr regiment. These were employed foraging in the villages of Heitern, Balgau, and Namsheim. The troops engaged in the sortie suffered severely from a heavy Prussian battery, which hurried up at a trot from the cantonments in rear. From the 7th October the place was preliminarily bombarded with field-guns only, which nevertheless set the town on fire in several places. This cannonade was particularly heavy in the later hours of the day, and especially from the south-west and north sides. It was interrupted for a short time at night, and continued with the same vigour on the following day. The artillery of the garrison answered the fire as well as they could.

Meanwhile the investing force before the place was reinforced with troops, and with siege matériel adapted for a more effective bombardment. Siege artillery, &c. were eventually sent from Strasburg, so that by the 9th October the blockade of the fortress may be said to have been close and complete. In order to facilitate the communication of the troops, and the forwarding of matériel on the right bank of the Rhine, arrangements were made for crossing the Rhine, chiefly with French bridging materials, between Arzenheim on the one side, and Jechtlingen on the other side, about  $1\frac{1}{2}$  miles ( $8\frac{1}{2}$  English miles) north of Neu-Breisach.

On the 12th and 15th October small sorties and engagements at the outposts took place without leading to any result of importance.

On the 26th October the investing and siege corps consisted of:—

- |                   |   |  |
|-------------------|---|--|
| 11 battalions     | } | of the 4th Prussian reserve<br>division. |
| 2 squadrons       |   |  |
| 4 field-batteries |   |  |
- 11 garrison companies of artillery, including one company of the 3rd Bavarian regiment of garrison artillery, and two of the Baden garrison artillery.
- 4 companies of Prussian pioneers.

Major-General von Schmeling was in command of this corps. The commanders of the siege artillery and of the engineers were, respectively, Lieutenant-Colonel von Scheliha and Lieutenant-Colonel Sander. Headquarters were in Künheim, one mile ( $4\frac{1}{2}$  English miles) from Neu-Breisach, on the road to Strasburg.

As it was intended to operate on Fort Mortier from the right bank of the Rhine, the artillery attack was undertaken on that side—in the same manner as before Strasburg—by two companies of garrison artillery and one siege battery, both of the Grand Duchy of Baden, with the aid of 12 siege-pieces, consisting of heavy guns and mortars.

The construction of the batteries took place simultaneously on both banks of the Rhine, on the night of the 1st and 2nd November, and was not interfered with by the enemy. The Prussians built their batteries near the villages Biesheim and Wolfgantzen, the Baden troops about a quarter of a league below Alt-Breisach, on a conveniently situated hill, and all opened together against the fortress on the 2nd November. The fire was directed more particularly upon the fronts of the fortifications opposite, and upon the gates and bridges visible, or that could be struck, their positions on the north-west and north-east fronts being accurately known, as well as against Fort Mortier and the splinter-proofs there, and the masonry that could be hit. A great effect was produced, especially in the latter work. Both the position and the armament of the batteries were very happily chosen. On the left bank of the Rhine only guns were employed,—namely, long and short 24-pounders, and siege 12-pounders, and on the right bank there were also four 50-pounder mortars. The infantry

detachment told off to guard these batteries was obliged, in order to maintain a careful watch over the fortress, to push its outposts by day up to 1,000 paces, and by night, of course nearer, up to 400 paces, right on to the glacis. They were provided with tools for making rifle-pits to obtain cover, and thence patrols were sent forward stealthily to the glacis. The duty was as arduous for our landwehr as it was dangerous. A bold deed that was done on one such occasion deserves mention. Deputy Sergeant-Major Blass, of the Gumbinnen landwehr battalion, with a patrol, fell upon a French picket in a house close in front of the glacis, and made them prisoners.

The capitulation of Metz was officially communicated to the commandant of the fortress; this event had, however, no influence on his resolution.

The artillery fight between the German batteries that have been mentioned, and the guns of the fortress, lasted from the morning of the 2nd November, day and night, with unabated vigour, till the 7th, on which day the cannonade was but slackly answered from Fort Mortier. Several of the Prussian batteries had, during the night, received new armaments suited to the change in their objects; and by a singular coincidence, the long 24-pounders taken in Strasburg, and the 27-centimetre mortars from Schlettstadt, did excellent service against their countrymen in the bombarded town, where the defence was unmistakably conducted with energy and skill.

Although Fort Mortier had its buildings terribly knocked about in every direction by the 3rd November, and had several of its guns dismounted, still its garrison fought well, and kept up the struggle with all their strength with the guns still remaining uninjured, which it was impossible to replace from Neu-Breisach.

On the 4th November a great fire was observed on the north-west side of Neu-Breisach, near the Colmar gate. The fortress seconded the fire from Fort Mortier, and owing to its situation set some houses in Old-Breisach on fire, and by this some damage was done on the next day to the cathedral of St. Stephen, which is remarkable for its architecture.

On the 5th November the garrison attempted a sortie.

On the night of the 6th-7th November two mortar batteries were built by the besiegers on the left side of the Rhine, to shell the attacked fronts of the bastions, and were each armed with four mortars of heavy calibre, in order to bring a fire to bear on the very active gun detachments on the ramparts, and the covered chambers there. An attempt made from Neu-Breisach to withdraw the garrison of Fort Mortier failed the same night.

Complete preparations had already been made by the siege corps for the assault of Fort Mortier, when that work unexpectedly, on the night of the 7th-8th November, offered to surrender, and the terms were arranged by Major von Kretschman, of the general staff, with Captain Casteli, commanding the fort. At the hour when the assault would have taken place, the 5 officers and 250 men marched as prisoners of war out of

the fort, which in every part presented a scene of shocking devastation. Of the seven guns that had served for its defence, six were dismounted—an honourable and brilliant testimony to the efficiency of the Baden batteries that were opposed to the work.

Soon after this event, the defence of Neu-Breisach also visibly became weaker, and the rapidity of fire hitherto maintained fell off materially, while the attacking batteries against the fortress on the left side of the Rhine were as active as ever. They were compelled to capitulate on the 10th November, and about 2 o'clock on that day white flags were hung out on the church-tower of Neu-Breisach, and on the ramparts. In accordance with the terms of a capitulation, concluded by Major von Kretschman with the French commandant, Lieutenant-Colonel de Kehor, at Biesheim, which was ratified at 7 o'clock in the evening by Major-General von Schmeling, the Prussian troops occupied the four gates of the fortress at 9 o'clock on the morning of the 11th November. About 10 o'clock the French garrison marched out of the fortress through the Basle gate, in the best order, under their commandant. In front of them was the siege corps drawn up in open square.

The Prussians paid well-earned honours to the brave garrison by presenting to them, and they then began at once to lay down their arms, and were marched off as prisoners of war.

Some of the prisoners were quartered at Sponeck, others at Neu-Breisach, on the right bank of the Rhine. In round numbers 100 officers and 5,000 men, including three battalions of the 74th regiment, were taken. The spoils of war consisted of 108 guns, 60 horses of the cavalry (*chasseurs à cheval*), 6,000 cwt. of ammunition, 1,300 cwt. of powder, and no inconsiderable stores of provisions, which last were all distributed, by command of Major-General von Schmeling, for the support of the needy inhabitants.

The town had suffered extraordinarily by the bombardment, especially by that of the 7th October. The northern and south-western parts had suffered more than the rest. The losses on this account that came into liquidation mounted up to 1,300,000 francs (52,000*l.*)

During the latter days the greater part of the inhabitants were accommodated in the casemates, in order to afford them cover from the destructive fire of the attacking batteries. Rumour gave them the credit of putting pressure on the commandant, to induce him to surrender the place, which surrender was, at any rate, somewhat hastened by the death, on the ramparts, of the French commander of the artillery.

The loss of the besiegers was very small, considering the results obtained. It amounted altogether to 8 killed and 18 wounded, most of them belonging to the artillery.





## SEDAN.

(PLATE X.)

SEDAN is situated on the railway from Thionville to Mézières, at the place where it crosses the road leading out of Belgium by Bouillon. It has 16,000 inhabitants and is an important manufacturing town. In the low-lying meadow-land to the westward there are many water-courses running into the Meuse, which flows through the fortress. A mile (4·68 English miles) above Sedan, at Remilly, the river receives the waters of the Chiers. On the east the ground rises to some steep wooded heights which make the approach from that quarter difficult. The fortress of Sedan lies on the right bank of the Meuse, opposite the suburb of Torcy, which is enclosed by fortifications consisting of four bastioned fronts. This bridge-head is united with the main work by connecting lines of a similar character. The citadel with its high profile, and the castle, in which Marshal Turenne was born in 1622, form the kernel of the whole. Several hornworks with ravelins cover the citadel on the east, and in front of them a spacious entrenchment has been thrown out, in order to bring under fire the ground, which is much cut up, and also the road to Lüttich. The ditches are wet only on the south-front, which lies low, and here, as in other parts of the fortifications, they have retaining walls in good repair. The fortress may, therefore, be considered as perfectly secure from assault, and an attack is not practicable without regular engineering preliminaries. However, the masonry is not everywhere sufficiently covered, considering the present ranges of artillery, for a long resistance. Nor does the place possess sufficient bombproof casemates for the garrison and the provisions. Moreover the spacious and extended works on the right bank of the Meuse are not such as to receive the numbers of troops necessary for counter-attacks on a large scale. This is a most essential point if a fortress is to be of use in modern warfare. The stock of provisions on hand was in no case sufficient to maintain, even for a few days, the great masses of French troops who were compelled to fall back upon the fortress; so that, immediately after the battle, it became necessary to have recourse, by agreement, to the resources of the neighbouring fortress of Mézières.

The fortress cannot be looked upon as having in itself any great strategical importance. Nevertheless, in its immediate neighbourhood, owing to the unexpected course of the events of the war, was fought one of the most important battles of the



campaign of 1870, having results of the widest influence on its further progress.

It will be remembered that immediately after the battles round Metz, the movements and strength of MacMahon's army remained for some time unknown. Meanwhile that army had reached Châlons, and the Marshal had to march thence to the northward by the positive command of Count Palikao, the War Minister, with the object of dividing the German forces and relieving Marshal Bazaine, who was shut up in Metz. But the German Army, on the contrary, which was advancing on Paris, closed up to the northward, covered its right flank with the Thionville-Montmedy-Sedan railroad, and thus drove the enemy's forces from the line Stenay-Varennes, into the narrow space between the Mézières and Sedan railway and the boundary of the neutral country of Belgium.

In consequence of the victory won at Beaumont on the 30th of August by the Ist Bavarian, the IVth Prussian, and the XIIth corps, the situation of the French Army in that position became precarious; and they were compelled to concentrate immediately around Sedan. The march to Metz must be considered as completely abandoned at this time.

On the 31st of August the German army undertook such movements as were necessary for surrounding the enemy. They kept in contact with him, and the artillery of the Ist Bavarian army corps had an opportunity of shelling the French columns as they were retreating, at first in some order, but at last in complete rout; upon Sedan.

It was not impossible that the French corps in and round Sedan, threatened as they were by the German army, but still concentrated, might nevertheless endeavour, by a rapid march to the west or east, to set themselves free from their position. For this reason the German army had to draw more closely round them an unbroken girdle of investment.

Accordingly, on the evening of the 31st of August and during the following night, the German armies were posted as follows:—

#### IVTH ARMY.—*Right Wing.*

The Guard Corps at Carignan on the right bank of the Chiers.

The XIIth Saxon Corps at Mairy.

The IVth Corps on the left bank of the Meuse at Sedan.

#### IIIrd ARMY.—*Left Wing.*

The Ist Bavarian Corps at Remilly.

The IInd Bavarian Corps at Raucourt.

The Vth Prussian Corps at Chéhery.

The XIth Prussian Corps at Donchery.

The Royal Württemberg Division at Bottaucourt.

The VIth Army Corps in reserve at Attigny and Semuy, ready to stop the enemy if he should break out to the westward.

Opposite to the positions of the Germans the French on the same night stood thus:—

1. *Right Wing*.—12th corps, General Lebrun, at La Moncelle, Platinière, and Petite Moncelle.

2. In the *Centre*, on the heights of Daigny and between La Moncelle and Givonne, the 1st corps, General Ducrot. The 5th corps, General Wimpffen, on the heights which command the Givonne valley, rested its right on the 1st and its left on the 3rd corps.

3. *Left Wing*.—The 3rd corps, General Douay, from Floing as far as the hill of Illy.

The position described an arc of a circle round Sedan from south-west to north-west, and extended over a line of 5 kilometres ( $3\frac{1}{6}$  miles) in length, about 4 kilometres ( $2\frac{1}{2}$  miles) from the fortress.

There was thus a gap on the east through which the French army, even if in disorder, might reach the Belgian frontier. They accepted battle, however, and that opening was practically closed for the first time in the course of the afternoon of the 1st September, at Illy, by the guard and the Vth corps.

On the morning of the 1st September the fight began with a general advance of the German corps towards the French position. His Majesty the Emperor and King halted on the hill at Frenois. In what follows we will only mention the critical events of this day of hard fighting in the order in which they occurred.

The fight began at 4 o'clock in the morning, at Bazeilles. This place was taken after several sanguinary attacks, and the enemy was driven back beyond Balan by the 1st Bavarian corps and Walther's division of the IIInd Bavarian corps. The Emperor Napoleon was present, close to the fight round Bazeilles.

From half-past 6 till half-past 9 o'clock the fight was pivoted on the position of La Moncelle-Daigny. The XIIth corps with its 23rd division took Moncelle; about 12 o'clock Daigny fell into the hands of the same corps aided by the 2nd guard division. The 23rd division pursued the advantage they had gained and the guards got round the flank of the enemy at Illy. All the batteries went up the captured heights, and nearly 100 guns were in action on the right wing. As already mentioned, the connection of the guard corps with the Vth corps at Illy was completed about 3 o'clock.

On the left wing of the combined German armies the XIth corps took Monges and thrust back the enemy on to his strong position between Floing and Illy. Here they came under a reverse fire from the Bavarian batteries which were posted on the left bank of the Meuse, north and north-east of Frenois.

The corps-artillery of the XIth and Vth corps came into action most effectively at Fleigneux. The XIth corps and the 19th infantry brigade took Floing about 1 o'clock in the afternoon. The enemy made some vigorous, but unavailing, attacks with his cavalry.

About 3 o'clock the enemy was in full retreat from different sides on Sedan, after Illy had been captured and he had lost the Bois de la Garenne.

During the fight nearly 25,000 prisoners were made, partly by the IVth army, partly by the Bavarian troops, the XIth, and the Vth corps; and 25 guns, 7 mitrailleurs, 2 flags, and 1 eagle were captured.

On the French side Marshal MacMahon was wounded at the beginning of the battle, and, in the course of the action, on the German side, General von Gersdorf, commanding temporarily the XIth army corps, was also wounded. At first General Ducrot became Commander-in-Chief of the French Army; but subsequently, in consequence of an order from the Ministry, General Wimpffen, being senior in the service, took the command. The former, acting on instructions received from the Marshal, made arrangements for a retreat on Mézières, but the latter cancelled the orders. It was, in fact, plain from the movements of the French during the fight that they first intended to break through to the west and then to the eastward. Round Sedan there were at the last 400 to 500 German guns in action. The fortress itself was only shelled by some Bavarian batteries during the later hours of the afternoon, and a forage store was set on fire. The Emperor Napoleon was taken prisoner; and the French army, completely shut in by a force of twice their strength, unable to break through or to prolong their resistance, after a council of war had been held under the presidency of General Wimpffen, were compelled to surrender. The negotiations were carried on in the château of Bellevue at Frenois and concluded at midday on the 2nd September.

Besides the prisoners made on the previous day, there fell thus into the hands of the victors 83,000 men, 14,000 French wounded, 400 field guns, including 70 mitrailleurs, many horses, and military stores, besides the fortress of Sedan with 184 garrison guns.

As a proof of the communication that existed between the generals of the French armies at Sedan and at Metz, we may here add, for the sake of completeness, that on the 31st August and the 1st September a severe action took place at the latter fortress also, Bazaine's army attempting to force its way out.

As the Convention of Sedan was taken as a model on several other similar occasions in the course of the campaign, its text is here given:—

“Between the undersigned, the Chief of the General Staff of King William of Prussia, Commander-in-Chief of the German armies, and the General-in-Chief of the French armies, both provided with full powers from their Majesties King William and the Emperor Napoleon, the following convention has been concluded:

“Art. 1. The French army, under the command of General Wimpffen, being now surrounded by superior forces at Sedan, give themselves up as prisoners of war.

“Art. 2. In consideration of the courageous defence made by this French army, all the generals, officers, and officials ranking with officers are to receive their freedom as soon as they shall have given their words of honour in writing not to take up arms again during the present war, nor to act in any way contrary to the interests of Germany. The officers and officials who accept these

conditions are to retain their arms and the personal property belonging to them.

"Art. 3. All arms and warlike stores, consisting of flags, eagles, guns, ammunition, &c. will be given over in Sedan to a military commission appointed by the French General, who will hand them over forthwith to a German commission.

"Art. 4. The fortress of Sedan will be placed at the disposal of his Majesty the King of Prussia, in its present condition, by the 2nd September at the latest.

"Art. 5. The officers who do not enter into the engagement mentioned in the 2nd article, as well as the troops, will be surrendered, without their arms, and drawn up by regiments and corps in military order. This proceeding will commence on the 2nd September and be ended on the 3rd. These bodies of troops will be marched on to the ground which is bounded by the Meuse at Iges, in order to be given over to the German commissioners by the officers, who will then hand over their command to the non-commissioned officers. The staff-surgeons shall, without exception, remain behind to attend the wounded. Given at Fresnois on the 2nd September 1870.

"VON MOLTKE.

"GRAF WIMPFEN."

## METZ.

(PLATE XI.)

METZ has 50,000 inhabitants, and is one of the strongest fortresses of Europe, and, as a fortification, much more considerable than Paris. It has, during centuries past, been often besieged, but never taken.

The fortress is situated on both sides of the Moselle, which forms on the south the islands of St. Symphorien and Sauley, and on the north the island of Chambière. The river is navigable at Metz, is 200 to 250 paces wide above the fortress, but only 100 to 180 paces below it, and is 4 feet deep; but often, after heavy storms of rain, or when the snow is thawing, becomes as much as 8 or 10 feet. The principal part of the town lies on the right bank of the Moselle, and is enclosed by a girdle of fortifications. The lines commence at the island of Sauley, cross from the left to the right bank of the river, and continue on that side until they reach the island of Chambière. Here there are two advanced works, the lunettes Chambière and Miollis, whose fire is directed upon the two arms of the river. Between the Sauley defences and the Chambière lunette, on the left bank of the Moselle, lies the large fort La Moselle, consisting of two whole and two half bastions. This work commands the roads to Thionville and Verdun (Paris) as well as the railway from Thionville to Metz, for which the temporary railway station (*Devant les ponts*) is situated close to the foot of the glacis.

The connected lines of the place turn to the east on the island of Chambière, and form the eastern and southern defences of the town, consisting of eleven irregular bastioned fronts, with ravelins outside. The ditches are partly dry and partly wet, but in time of war can all be placed under water. This is effected by sluices connected with the small right arm of the Moselle. The enceinte of the city is covered by several advanced works close in front. Among these are, on the south, the citadel, consisting of a crown-work with a ravelin, and the advanced lunettes d'Arçon and Rogniat. These command the island of St. Symphorien and the ground to the south, with the railway works, as well as the road to Nancy. The redoubt du Pate lies to the east of the citadel to command the low ground of the Seylle, which can be made use of for an extensive inundation. The







stream flows between this redoubt and the advanced work, Fort Gisors, into the town. The latter fort commands the road to Strasbourg and the valley of the Chenan rivulet, which also can be turned to account to flood the hollow ground.

On the north-east of the town, between the roads leading to Saarlouis and Bouzonville, and guarding those roads, lies the great Fort Bellecroix, consisting of three bastioned fronts, with ravelins. The left demi-bastion and the adjoining bastion flank also the island of Chambière, and the left bank of the Moselle in the direction of St. Eloy.

In front of these inner works, which serve for the immediate defence of the town, at a distance of 3,000 to 5,000 paces from the enceinte, are a number of detached forts, pushed forward on the surrounding heights and points of defensive importance. These guard most effectively, and at greater distances from the place, the roads leading to Metz. The traces of these works are exceedingly well laid out, and they have strong profiles, and the forts possess, therefore, almost without exception, great capabilities of defence. Their development of front is considerable. Some of their garrisons amount to 3,000 men, and the armaments in some of them to upwards of 100 guns. These detached forts are as follows: Fort St. Julien, on the north-east of the town, on a height about 770 feet above the Moselle, to command the valley of the lower Moselle and the road leading to Bouzonville; Fort Queleu, at an elevation of 693 feet, between the road to Strasbourg and the Seylle; Fort St. Quentin and Fort Plappeville, the latter named also Des Carrières, covering Fort Moselle, and firing over an elevated plateau 1,000 feet high, across which passes the road to Verdun and Paris.

Between these four older forts a number of additional detached works have been inserted more recently, particularly since the Luxemburg affair in 1867, namely, Forts Embarcadère and St. Privat on the south, Les Bottes on the east of the fortress, on the road to Saarlouis, St. Eloy, between the Moselle and the road to Thionville, and two smaller works north of Fort St. Julien, on the road to Bouzonville.

All the forts, though their construction was not quite completed, were connected by lines of telegraph with the main work, and to some extent with one another.

In the protection afforded by these detached forts lies the real strength of Metz, for they render it difficult completely to surround the fortress, and, owing to the great circumference of the works, make it necessary to employ a very large investing force. They secure the main work from bombardment, and the attack upon the enceinte cannot even be commenced until one or more of them have fallen. Finally, they give the main work the character of an entrenched camp, and allow of the concentration under their shelter of vast masses of troops and of rapid offensive operations.

Metz possesses enormous military stores of every description, and was most amply provided with powder and with guns. As regards



military establishments, it contains a military clothing factory, a dépôt for the equipment of cavalry, a laboratory-school, a school of fortification, and a powder factory. The manufacture of powder is a monopoly in France. The arsenal for the engineers, almost the only one in France, and two arsenals for the artillery, are situated in the Guisen entrenchment, which adjoins the citadel. These dépôts contained arms and equipment complete for an army of 150,000 men.

The barracks of the engineers, the only ones in the fortress that are bombproof, are on the Königsplatz, those of the artillery at the Chambière gate, and those of the infantry in Fort Moselle, where also is situated the hospital prepared for the reception of 1,900 men.

The drinking-water in Metz is bad, and tends to produce fevers; during the last few years, therefore, an underground conduit has been made, which draws its supply from Gorze, two miles (9·4 English miles) to the west of the fortress, and brings daily to the place 10,000 cubic metres of wholesome water. Another, but a secondary conduit, brings water to the place from a collecting reservoir near Gravelotte.

Metz was originally a German city. Under the secret influence of the priests, as at Strasburg, it was transferred by treachery into the hands of France, whose King, Henry II., in the year 1552, caused the city and fortress to be occupied by the Constable Montmorency. A fruitless siege was undertaken by the Emperor Charles V., and conducted by the Duke of Alva for a period of sixty-five days, against the fortress, which was even then of great strength. The place was first formally handed over to France by the Treaty of Westphalia in 1648.

Notwithstanding the great strategical importance of Metz in a war with Germany, and in spite of its important position on the actual theatre of war, the fortress was at the outbreak of the campaign in an unprepared condition. Serious preparations for a siege, as regards both the fortifications and the artillery were first undertaken after the battle of Forbach, and for this purpose nearly 15,000 peasants were summoned from the country to the fortress, who later on were unable to get out again, and consequently had to be subsisted.

Under these circumstances it would not have been absolutely impossible for the Prussians, at the expense, perhaps, of heavy losses, to have established themselves in Fort Bellecroix, after the battle of the 14th August. It is another question whether it would have been possible to hold this position, situated immediately in front of the main work, when the French, after three days disorder of their closely massed forces, had fallen back upon the fortress, some 160,000 strong, on the night of the 18th-19th August. The consequences of the battles of the 14th, 16th, and 18th of August were not known until after the capitulation of Metz, on the 27th October. In the French army, which had been beaten four times in succession, discipline was relaxed, the power of taking the offensive, always considered a special attribute of the

French, was wanting, and the army required, before everything, a thorough re-organisation. This was a circumstance that stood us in good stead, and prevented the French from making use of the advantages offered to them by the strength of the fortress.

After the investment of the fortress by the Ist and IInd armies the preparation of the fortifications and the armaments for the defence were continued. The works in progress were in great measure masked from the investing force, owing to the extent of the circle round which the French field-army was posted. The garrison and the national guards, together amounting to 30,000 men, were in the fortress during the investment.

Fort Plappeville, as well as all the other detached forts, was strengthened by the construction of traverses, expense magazines, and stockades, and brought into communication with the adjoining Fort St. Quentin by a covered road. This road was flanked by a lunette placed in the centre. The chief object was to complete as speedily as possible the works in course of construction, and to put the place in a defensible condition by completing the parapets and the gorges of the works, by constructing temporary bombproofs, and by clearing the zone of fire. In the main work only were the preparations complete for resisting a sudden attack, the gates and bridges properly guarded, the flank defences put in a condition to sweep the ditches effectively, the ramparts prepared for defence by infantry and artillery, and the glacis cleared. The field army outside the fortress had in their possession about 25 or 30 farms and villages. They secured themselves in these by barricading the entrances and provided for eventually placing the outposts in security by shelter-trenches and rifle pits. The outlying pickets lay for the most part in shelter-trenches covered from the view of the enemy outside. Ground that afforded natural or artificial cover was arranged for defence, as, for example, the railway embankment at Montigny on the south of the fortress, and the park and château of Ladonchamp on the north. Communications were stopped up, where necessary, by abattis; new routes for troops were made through the copses, and pontoon bridges as, for instance, at Moulins, were thrown across the Moselle to connect the two sides of the river. As sorties might have to be made on a large scale, the number of communications over the river was increased, and for this purpose some bridge-trains, that had opportunely come within the limits of the fortress in the general retreat of the Army, afforded the means.

As the hills around the fortress were occupied by the forts, and afforded excellent sites from which to observe the Prussian position, special observatories were not erected. The highest traverses in the works were used for this purpose.

*Lodging of the troops.*—While the field army was accommodated in camps and in the strongly occupied farms and villages that lay around, the barracks were occupied by the war garrison in Metz and in the forts in the manner customary in time of war. But even with great crowding the total accommodation available in them was insufficient, and it was necessary to convert to this use

the magnificent cathedral of St. Stephan, celebrated for its fine stained glass and its tower 350 feet high, and the churches of St. Eucaire and St. Segolène. The most important camps were on the north-east slope of Mount St. Quentin, south of the fortress near Fort Embarcadère and St. Queleu, and north-east of Metz, between Forts St. Julien and Les Bottes. The ground used for these camps was, however, hilly, and as it was the wet season, this caused the water to accumulate and made swamps of the camping-grounds, thus rendering the sleeping-places unhealthy.

All authorities agree that the fortress was amply provisioned for its own war garrison of 30,000 men for three months, and received further supplies from a number of provision trains, that were originally destined for the French army that marched out to the west of Metz, but, after the first battles on the German frontier, were stopped on their road and retained in the fortress. From Paris, particularly at this time, immense convoys arrived, for the fortress was intended to form the base of operations for the army on the Rhine. The position of affairs was changed after the battles round Metz, when the fortress was blockaded and all communication with the outside was cut off. The great masses of cavalry enclosed in the blockade, having a strength of some 24,000 horses, must have suffered most. Their evil plight first became apparent in the early part of September. Subsequently, lean horses were driven beyond the outposts, and the slaughter of the better ones began about this time. The rations for the men became scarcer by degrees, and by the end of August engagements of the outposts took place with the object of obtaining all the provisions out of the villages and digging up potatoes in the country round. In Nouilly, three-quarters of a mile ( $3\frac{1}{4}$  miles English) eastward from Metz, large stores of provisions intended for the French were discovered by the Prussians. The French, it is true, kept up for a long time their communication with the country, which ended, when discovered by the Prussians, in the destruction of the villages concerned. Thus the Prussians burnt the village of Peltre, and blew up with dynamite a farm there called *Le Grange aux Bois* because it was evidently useful to the French in their foraging expeditions. The beef was generally reserved for the hospitals. The water for drinking in Metz had to be filtered after the destruction of the conduit near Gorze, in order to render it at all drinkable; but, on the other hand, the wine was not all gone, and there was some left up to the time of the surrender.

In the second half of September the soldiers received half rations of horseflesh. The want of salt, however, prevented the meat from being pickled in the regular manner, and preserved in this way it did not answer their expectations because they had neglected to slaughter the horses at the right time for this purpose. There was great scarcity of straw for bedding, the supply being barely sufficient for the sick and wounded.

In the beginning of October, for want of forage, the field batteries were reduced from 6 to 4 guns, and a kind of influenza carried off many horses, who fell victims to disease, partly owing

to the length of time they were in bivouac in very bad weather and to want of care, and partly owing to change of diet, as they had barley and corn in their food. The rinderpest coming on carried off all that were left of the cattle.

The distress became worse as the investment was prolonged. At first 400, then 300 grammes (about three-fifths of a pound) of horseflesh and bread were served out to each man as his daily ration.\* The field army was, in this respect, much worse off than the garrison of the fortress, of whom none during the investment suffered actual hunger. At the end of October, the commandant established a system of rations for the inhabitants, and fixed the price of provisions for them, and they shared the sufferings of the garrison with a praiseworthy spirit and endurance. At this time in Metz butter was 14 francs the pound, meat and bacon 8 francs the pound, potatoes 20 sous, horseflesh 20 sous, an egg 15 sous, a schoppen (pint) of milk 14 sous, and lastly a pound of salt 20 francs. The fourteen corn mills in Metz remained at work to within two days of the capitulation. It may be assumed that during the investment nearly 20,000 horses were slaughtered.

*Hospitals.*—Owing to the great numbers of sick and wounded, which daily increased during the investment, and at the capitulation amounted to 20,000 men, the energies of the medical branch were taxed to the uttermost; and, particularly, a great want of hospital attendants was experienced. The military hospital for 1,900 sick soon proved insufficient, and, as early as the beginning of September, it became necessary also to quarter the sick and wounded in the barracks of the engineers, the artillery barracks at the Chambières gate, the civil hospitals, the churches of St. Martin, St. Maximin, and St. Vincent, and in many private houses. In front of the Palais de Justice, close to the Porte Serpenoise, 336 tents were pitched for the sick; and, on the parade near the artillery barracks, there were collected 288 railway goods wagons, in which 3,500 sick were lodged. In particular, diarrhoea, dysentery, typhus, and scurvy made their appearance, the last in consequence of not having salt, and owing to the want of variety in the diet; but, it should be observed that the dreaded and dangerous miasma from the neighbouring battle-fields and the numbers of unburied carcases of horses turned out to have less effect on health than was naturally anticipated; a blessing for which apparently thanks were due to the cold weather in September and October. The result in this respect was different with regard to the stagnant inundations of the Seylle on the south of the town. As early as the first half of September, Marshal Bazaine requested Prince Frederick Charles to allow the sick and wounded in Metz to be sent away to the interior of France, which request was naturally refused. A similar reply was given to his request at the beginning of September that surgeons with medical appliances might be sent into Metz. The inhabitants of Metz endeavoured to alleviate the sufferings of the French sick and wounded soldiers

\* 400 grammes = about 14 oz. or  $\frac{7}{8}$  lb. avoirdupois; 300 grammes = about 10 $\frac{1}{2}$  oz. or  $\frac{3}{4}$  lb. avoirdupois.

with all their power, and the troops had to thank the wives and daughters of the inhabitants that it was found possible to distribute large stores of winter clothing to the army.

*Intelligence department.*—Owing to the large military traffic by rail to and from the theatre of war, the postal service during the first half of August got into the greatest confusion, and with the commencement of the investment all communication of the French army with Paris, the neighbouring French fortresses and the adjoining country, was cut off. Nevertheless various expedients were adopted to keep up the communication with the government in Paris and with the military headquarters of France. Carrier-pigeons and spies were made use of. One of the latter, disguised as a Franciscan monk, fell into the hands of the 1st Prussian army on the 4th August, and with him a correspondence between Marshals Bazaine, Palikao, Trochu, and MacMahon. The French tried to send news on wood-floats, and concealed in pigs' bladders, down the Moselle to Thionville. Many gas-balloons were sent up, of which one came into the hands of the Prussians in the neighbourhood of Paouilly, 2 miles ( $9\frac{1}{2}$  English miles) north-east of Metz. By this means, however, no serviceable intelligence of a trustworthy character was obtained of the French army. Generally, this post was sent up at night, so as the better and more securely to cross the investing lines of the Prussians.

The works of fortification of the blockading army had for their object to prevent surprise by an advance of the enemy in force, and to detain them long enough to permit of the troops being concentrated in sufficient numbers. The French had the advantage that they could choose what point they liked in the circle of investment, and there make a sortie. The Prussians, on the other hand, besides being fewer in number, were at a disadvantage in having to be ready to receive an attack from the French throughout the whole circle of the investment. It became necessary, therefore, that the Prussians should be able to concentrate on any point in the shortest possible time. For this purpose bridges were thrown over the Moselle above and below the fortress, for instance, at Argency, Hauconcourt, and several other places; roads for troops were traced or cut, and all the special arrangements suitable for the attainment of this object were made. After the battles of the 16th and 18th August, notwithstanding that movements to the rear had again become necessary in some cases, the complete investment of the positions held by the enemy was accomplished rapidly and with the accustomed precision. The headquarters of the army corps were placed in communication with one another, and with the headquarters of the army by means of lines of field telegraph, and the technical troops charged with this duty had thus a very wide field of activity, and one that was intimately associated with the military operations. The existing French telegraph lines and railways leading to Thionville and Paris and to Strasburg were destroyed, and their materials were used for the purposes of the investment. The intercourse with the fortress by means of a flag of truce was reduced to a minimum after the

French, contrary to every custom of war, had fired upon some of the bearers. This happened on the 19th August to Lieutenant-Colonel von Verdy and Captain von Winterfeld, on the 24th August to First Lieutenant von Kurowsky, and on the 1st October to Lieutenants von Röder and Manegold.

Observatories were set up on the highest points of the ground, and two artillery officers provided with good telescopes did duty in each. Each army corps had its own; such was, for instance, that on the hill of Le Horimont, south of the village of Fèves, 1½ miles (8·2 miles English) north-west of Metz, whence a complete view was obtained over the broad plain of the valley to the north of the fortress and the French bivouacs there, and which was of eminent service.

As it was expected that the blockaded army of the French intended to break out in a northerly direction towards Thionville, the main point was to watch the fortress, and therefore its investment was completed before any idea was entertained of following up this operation immediately with a bombardment.

As long as the French held Metz, the railway communication by the lines Saarbruck to Metz and Nancy on the one hand, and Metz to Thionville on the other, was interrupted. The construction was, therefore, commenced of a railway from Remilly to Pont-à-Mousson, so as to work round the railway junction at Metz. Accordingly on the 9th August Captain Golz of the general staff received orders, in conjunction with field railway detachments No. 1, under Commissioner Dirksen, and No. 4, under Superintending Engineer Menne, to restore the communication with Saarbruck out of the partly destroyed line from Saarbruck to Remilly, and next to construct a new railroad passing to the south of Metz from Remilly to Pont-à-Mousson. The first portion of this order being executed by the 13th August, the preparations for, and the setting out of the new junction line, about 5 miles (23½ miles English) in length, were commenced on the 14th. The actual completion of the united lines took place on the 23rd September, or in round numbers after 5 weeks' work. The road was a single line with a formation-width of 12 feet. Among the larger works were two viaducts near Remilly, of which the largest was about 350 feet long and 22 feet high, besides two bridges over the Moselle and its affluent the Seylle. All these works were made of timber.

Immediately after the battle of Gravelotte, on the 18th August, the positions of the outposts on either side were not finally determined. Backward and forward movements of the opposing forces took place. On the night of the 19th-20th August the French for the first time took up in force the positions which they held, with few exceptions apparently unaltered, during the whole of the investment. The length of the circumference occupied by the Prussian outposts was nearly 6 miles (28 English miles), and that occupied by the main body, consequently, 8 miles (37½ English miles). Without telegraphic communication the success of a sudden attempt of the French in force to break through would

not have been improbable under the circumstances above mentioned.

The troops were at first quartered in open bivouacs and in huts of brushwood; but, by the middle of September, they were, as far as practicable, lodged in conveniently situated close cantonments. For the outposts and pickets weather-screens and huts of brushwood and other materials were erected, and houses and stables conveniently situated were also made use of; but, in spite of all, the troops suffered terribly from the inclemency of the weather. As Gorze lay within the lines of investment, the waterworks there could not remain unnoticed or concealed. By the end of August they were destroyed.

The arrangements for defence which were undertaken on the part of the besiegers consisted in the formation of the ground in various ways so as to adapt it to the tactical conditions mentioned in the beginning of this section. The limits of this book would be far exceeded if we were to enter upon the details. Some general observations will suffice.

Outposts and pickets lay in shelter-trenches, or in hollows in the ground provided with banquettes for this purpose, according as hollow roads, gravel-pits, loam-pits, or the ditches of high roads presented themselves. By a singular accident, the shelter-trenches which were constructed by the enemy, on their retreat during the battle of Gravelotte towards evening on the 18th August, were used for a long time by the Prussian outposts. The French are very ready at making such trenches in a short time. A similar thing happened with regard to a battery between St. Privat and Amanvillers, which on the same day had been of great service to the French, but was now turned towards the fortress. In front of all was formed a sort of line of obstructions.

The Prussian outposts were partly armed with chassepot rifles, on account of their great range. Routes for columns of troops were made where necessary, roads were improved, and the edges of woods were obstructed by abattis and rendered impassable. Farms situated in important places, especially those from which fire could be directed on the roads by which the enemy would advance, as at Orly, Tournebide, Frescati—both the latter on the south of the fortress—were prepared for defence; that is to say, loopholes were cut in the masonry, the entrances were barricaded, and they were made secure with palisades. Favourable situations for artillery were made use of for the erection of the larger batteries, or were prepared by excavation for the reception of the guns, as it was confidently anticipated that their practice would be fatal to the enemy's operations, especially by checking the advance of his attacking columns. Such batteries were situated, among other places, on the heights at Chieulles, Vany, Faily, and Servigny, to the north-east of the fortress, where, in spite of the ground being much broken, a good and wide view of the scene of action was obtained, and also at Saulny, Nocroy, Bellevue, Fèves, Semécourt, and elsewhere. All the defiles which could be possibly used by the French for breaking out were, in the course of time, fortified

as formidably as circumstances permitted ; and, in places where the enemy was actually expected to appear, the besiegers had, moreover, taken the trouble to construct independent field redoubts in the line of defence.

The continuance of bad weather and the extremely arduous duty of the investing force had undoubtedly at times a bad effect on their state of health. Diarrhoea and typhus carried off some victims, but these diseases would have had very far more serious results and a wider range had it not been that every possible care was bestowed upon the hospital-establishments and upon the nursing and subsistence. In the latter respect there was no failure, and the continual supplies and issues of pease-sausage,\* of fresh and of preserved meat, produced the best effects. A difficulty seemed likely to occur in the supply of meat when the rinderpest broke out in Lorraine and Alsace, but mutton was issued instead of beef, and steps were taken to bring up herds of cattle from Belgium and Holland for the supply of the troops.

*Sorties.*—Having described the position of the opposing armies in and before the fortress in their chief features, we turn now to the most important sorties on a large scale which took place from the 19th August to the 28th October.

The idea of a regular siege of the great fortress was, with accurate knowledge of the circumstances, renounced from the very first. The large forces shut in, both in and round the fortress, would have rendered it unusually difficult to establish parks, and conduct the attacks against the detached forts, which were well situated and amply supplied with guns and stores, and these forces might, in the end, have produced a very critical state of affairs. It was determined, therefore, only to invest Metz, and for this duty there were allotted the Ist, IInd, IIIrd, VIIth, VIIIth, and Xth army corps, the 18th division, the division of the Grand-Duchy of Hesse, and the landwehr reserve division von Kummer. The Ist army was thus amalgamated with the IInd army, and placed under the sole command of Prince Frederick Charles. This army, amounting to about 230,000 men, being thus detained, however, it became impossible to employ them even partially in operations in the open field elsewhere.

Under these circumstances, after their terrible exertions in the battles of Mars-la-Tour and Gravelotte, both friend and foe required some days of rest, in order that they might both settle themselves down to the new condition of affairs. Towards the end of the month, however, on the 26th August, movements of troops were observed in the French camps, from the left to the right bank of the Moselle, which might be preparatory to an attempt to break through the Prussian lines. The enemy confined himself, however, to skirmishing with the outposts, as he found the Prussians ready to fight. Meanwhile, news was received of the advance of MacMahon's army from Châlons and its encounter with the IVth army at Beaumont. In the investing lines, therefore, pre-

\* Erbswurst.



parations were made for the expected junction of Marshals MacMahon and Bazaine.

Then came, on the 31st August and the 1st September, the battle of Noisseville. The Prussian troops engaged were posted on the 30th August as follows:—

1. The 1st landwehr division von Kummer, with a brigade of the line, behind the line Malroy-Charly, the landwehr in reserve.
2. The 1st infantry division—the 1st brigade of infantry in and behind the line Failly-Servigny, the 2nd brigade of infantry in reserve.
3. The 2nd infantry division—the 4th brigade of infantry at Ars-Laquenexy with their front on the line Mercy-le-Haut-Aubigny-Colombey, the 3rd brigade of infantry in reserve.
4. The divisional cavalry—the 1st and 10th regiments of dragoons between Noisseville and Colombey.
5. The 3rd cavalry division and the 28th brigade of infantry guarding the ground between the 2nd infantry division and the Moselle.

On the 31st August, at half-past 7 in the morning, the French had taken up a position south of Fort St. Julien on the line Metz-Bellecroix. The following movements consequently took place.

1. The 3rd brigade of infantry of the 2nd division, with two batteries, marched to the high road to Saarbruck on the heights of Puche.
2. The 1st brigade of cavalry of the 3rd cavalry division marched to Retonfay to cover the ground between the high roads to Saarbruck and Saarlouis. By command of General Steinmetz the whole of the cavalry division was moved to that place.
3. A cavalry regiment and a battery of the Kummer division marched to St. Barbe. The division of the Grand-Duchy of Hesse crossed the Moselle to the support of the Kummer division. The centre stood fast, while the wings alone were at first engaged.

About 9 o'clock the French attacked the Prussian left wing; Colombey was lost to us, but Aubigny and Mercy-le-Haut were held. The 28th brigade of infantry was brought on the battle-field, as a reinforcement, and took up a position at Laquenexy without coming into the action, which was fought by the 2nd division alone. The former marched to the bivouac at Courcelles.

The Prussian right wing was attacked by a French cavalry regiment, with artillery, who were, however, beaten back by the artillery of General von Kummer. Fort St. Julien opened fire and covered the retreat of the enemy. At 3 o'clock in the afternoon the enemy commenced a heavy fire from Fort St. Julien, and from several batteries that were drawn up there to the southward, and were answered from seven Prussian field-batteries, in whose favour the engagement was decided about 5 o'clock.

Meantime Lebœuf's whole corps advanced by Nouilly to Noisseville; the 3rd brigade of infantry retired from the field after a severe engagement round the village and the brewery there, and fell back in good order on Servigny. Batteries of the enemy debouched towards evening from Nouilly and fired on the Prussian

artillery at Servigny. Noisseville was finally taken by Memerty's brigade, the whole position was held, and the fight terminated apparently about 9 o'clock. Unexpectedly, however, the enemy recommenced the action, took possession of Flanville, Coincy, and Noisseville, and captured a portion of Retonfay, which nevertheless they had to give up again. At the same time attacks were made upon Servigny, Poixe, and Faily. The battle did not cease till 11 o'clock in the evening. In expectation of its renewal on the following day, the infantry and cavalry brigade of the Grand-Duchy of Hesse and the corps artillery of the 9th army corps were directed during the night to cross the Moselle to the scene of action at St. Barbe. Accordingly, on the following morning, the positions were as follows: Kummer's landwehr division and the 1st army corps on the field of battle during the whole night; the 25th and 28th divisions at Antilly and advancing on Charly; the IIIrd and VIIIth army corps, as on the previous day; the IIInd, IIIrd, and Xth army corps on the left bank of the Moselle, near Montmedy, only  $1\frac{1}{2}$  mile (7 English miles) from Metz.

On the 1st September, at 4 in the morning, the battle was renewed, and turned first upon the possession of the thrice-captured Noisseville. It was not possible, however, in spite of the great bravery of the troops, to keep our hold of it, so that we contented ourselves for the time with preventing the enemy from debouching from it. As soon as it was ascertained that strong reinforcements were about to arrive, a heavy fire of artillery was commenced from 50 guns against the place and Noisseville was taken.

On the left wing the village of Flanville was captured about 9 o'clock in the morning by the 28th brigade of infantry, particularly by detachments of the 53rd regiment. The 28th infantry brigade thereupon took Coincy, and were subsequently employed to cover the Saarbruck road.

At the same time unsuccessful attempts were made by the French on the right wing to take Faily and Rupigny. They were beaten back and pursued as far as the Bois de Grimont by the brigades of Below and Blankensee.

In the centre the French advanced about half-past 10 to the attack of Poixe and Servigny, but their movements appeared hesitating and wanting in vigour. The Prussian artillery beat them back at both places. This failure was the signal for the French to retire into their original positions, while ours were held, though with great losses. These amounted altogether to 151 officers and 2,848 men. The French lost 141 officers and 2,664 men.

On the 2nd September the XIIIth army corps arrived before Metz, and in consequence the German army was distributed for the investment as follows: Kummer's landwehr division on the line Malroy-Charly; to its left, the 1st army corps as far as the Saarbruck road; and then came the XIIIth corps as far as Pouilly. The VIIth corps was placed on the south of Metz on both sides of the Moselle, covering also the passages over the Seylle. On the left bank were the VIIIth corps from Jussy to Chatel, the IIIrd corps from Chatel to Saulny, the Xth corps from Saulny to Marange.

In reserve, on the natural line of communication of the enemy with the interior of France, was the IXth corps extended on the line from Roncourt to Pierrevilliers.

The battle of Noisseville was the last great attempt made by Marshal Bazaine to break through the investing army, and was followed by three weeks of apparent rest. The next engagements brought on by the French were for the purpose of covering their foraging expeditions in search of hay, straw, and provisions, especially potatoes, a sure preventive of scurvy, which appeared in the fortress owing to the want of salt. Eventually the French used generally to advance with strong columns against our outposts, who thereupon fell back upon the positions previously fortified. If such an attack succeeded, they retired with their booty under cover of the forts, and the Prussian outposts in the evening were back again in their old positions. In this way villages and farms were burnt and much damage of other kinds was done. Such was the character of the engagements at Peltre on the 22nd and 23rd September, and at Mercy-le-Haut on the 27th September. Perhaps also in these engagements the French had some idea of making an attempt to break through in the direction of Strasburg. The VIIth and Ist army corps were engaged in both the first-mentioned fights, which did not assume large proportions. Of a more serious character, however, was the fight on the 27th September, which was at first directed against these same troops, but subsequently also against detachments of the Xth corps at La Maxe on the left bank of the Moselle. On this occasion the French troops were brought immediately on to the battle-field by the railway, which had been reconstructed within the line of their outposts. These battles had no particular consequences, although the loss was considerable on both sides.

After the fall of Strasburg Marshal Bazaine seemed to have an idea of breaking through to the northward, in the first instance to Thionville, in order to occupy that place or to pass over with his army to neutral territory. Consequently, the distribution of the investing force had to be altered. For the execution of his plan Marshal Bazaine chose the moment when Kummer's landwehr division came on to the line of outposts in the place of the Xth army corps. The most advanced outposts consisted of two landwehr battalions in patches of wood north of the Bois de Woippy, and pushed forward to Bellevue, St. Remy, Les Petites and Les Grandes Tapés, with pickets at St. Agathe and Ladonchamps.

On the night of the 2nd October the enemy attacked, threw the outposts above mentioned back upon the pickets at St. Remy, which they assailed in vain, and of which the garrison, consisting of two companies of the Neutomischl landwehr battalion, was at once reinforced by two companies of the Kosten landwehr battalion.

About 5 o'clock the enemy made a fruitless attack on St. Remy, whose garrison had been meanwhile strengthened by four more companies, and also on Bellevue, which was defended by the Freistadt landwehr battalion. The six companies of the last-

named battalion retook St. Agathe, two Prussian batteries fired on Ladonchamps from Semécourt, and from 9 o'clock A.M. a third Prussian battery which had taken up a position at Les Tapes, joined in the cannonade. Upon these was directed the concentrated fire of several French batteries placed at St. Eloy, and they had in consequence to retire. Whilst the landwehr division held their ground against a vastly superior enemy, the artillery fire on both sides was kept up until the evening, and by it St. Remy and Franclochamps were set in flames.

On the 7th October the French made a second attack on the field of battle, on which they had already learnt by experience the bravery of Kummer's landwehr division, and an engagement lasting nine hours took place at Woippy. At 1 o'clock in the afternoon our outposts of Kummer's landwehr division were attacked at Bellevue and St. Remy, as well as at Les Petites and Les Grande Tapes, by French columns greatly superior in numbers, about 30,000 or 40,000 men, and after a brave resistance beat them back. The Prussian landwehr fought here with the greatest obstinacy, the most stubborn endurance, and the most brilliant courage, so that the enemy was unable to gain ground. Simultaneously with the commencement of this attack on the left bank of the Moselle, the French made a demonstration on the right bank, against the position of the 1st army corps at Servigny and Noisseville, and against the Xth army corps at Malroy and Charloy. The fight here was only with artillery and musketry, which the French thought sufficient to prevent these troops from crossing the Moselle. In spite of this, Wedell's brigade of the Xth corps, the 16th and 57th regiments, crossed the Moselle at Argency. Here they formed to attack on the flank of the left wing of Kummer's division, while at the same time, on the right wing, Conta's brigade of the 48th and 4th regiments of infantry advanced and occupied the Bois de Woippy and a farm close by. The French being vigorously attacked both in front and on their left wing, had to give up again the positions they had taken earlier in the day, and to fall back upon the fortress, whilst the Prussians remained masters of the same ground as at the beginning of the fight. They took Bellevue, St. Remy, and the two Tapes by storm. On the other hand they failed in an attempt made late in the evening to take the Chateau Ladonchamps, which was strongly occupied by the French and fortified. The loss on the Prussian side amounted to 65 officers and 1,665 men.

*Capitulation.*—Marshal Bazaine, after the failure of all his sorties, could not but be aware that further enterprises of the same description would only be attended by similar results. His honour as a soldier was saved, and his duty to his country was done, in detaining 230,000 men before Metz. But if he had succeeded in breaking out—if the Marshal had marched towards Paris, he would but have come between two fires; and as regarded any other objects of his march, without cavalry or horses for transport, with his guns wretchedly horsed, with no safe communication to the rear, without the means of supporting his army, he would have

been exposed to the most harassing pursuit. The consideration of these circumstances clears the Marshal of blame, considering the question from a military point of view, and the more so, as although cut off from all communication by either land, water, or telegraph, he had held out in a place, which, having been originally provisioned for 15,000 or 20,000 men for three months, had already maintained eight times that number of troops for nine weeks. Whether the Marshal had any ulterior political reason for his conduct, we know just as little as we know the motive of the mysterious journey of General Bourbaki from Metz to the Empress Eugénie. In no way had the capitulation been of use to M. Gambetta, whose plan was to raise the siege of Paris by armies newly formed in the North and South. This plan was frustrated now that the 1st and IIInd Prussian armies before Metz had become available.

The time for negotiations for a surrender had come, and to delay was to starve. Marshal Bazaine wished to surrender himself and the army, but to keep the fortress for France. On the side of the Prussians, however, this could not be agreed to, because the place, if excluded from the capitulation, was in a condition to hold out for many months. Nothing came, therefore, of the negotiations to this effect, which General Boyer was engaged in from the 13th to the 15th October, at the German headquarters at Versailles.

On the 21st October General Coffinières, the commandant of the fortress, informed General Bazaine that he had no more provisions for the troops quartered outside the fortress. In consequence of this, desertions were tacitly allowed, but the deserters were turned back by the Prussian outposts in great numbers. It was also thought that the Prussians might be compelled to take the army prisoners, by bringing on a battle with this intention. At last they thought to sally out by Gravelotte, on the night of the 24th-25th October, but this plan was not executed.

On the 25th October, General Changarnier entered upon fresh negotiations with Prince Frederick Charles. The terms of the capitulation of Sedan were taken as a basis, and the officers who chose imprisonment were permitted to carry their arms away with them.

On the morning of the 27th October the fortress fell into our hands, perfectly uninjured, together with its military establishments, with its 3 marshals, 50 generals, 6,000 officers, 173,000 men, 53 eagles, 300,000 stand of arms, 66 mitrailleurs, 541 field guns, 800 garrison guns, the stores of 85 field batteries, and 2,000 military vehicles. On the same day the Crown Prince and Prince Frederick Charles were made Field Marshals. Thanks are due also, however, to the brave investing army, who for ten weeks bore all the hardships with a steadfast endurance peculiarly their own; who, by steady vigilance and unequalled courage, brought about a result without example in military history, and had compelled the army of the enemy to lay down their arms in Metz, which had been called by them with proud confidence an impregnable fortress.

Already, eight days before the capitulation, railway wagons, with provisions for the garrison and inhabitants of Metz, were standing in the railway station of Courcelles.

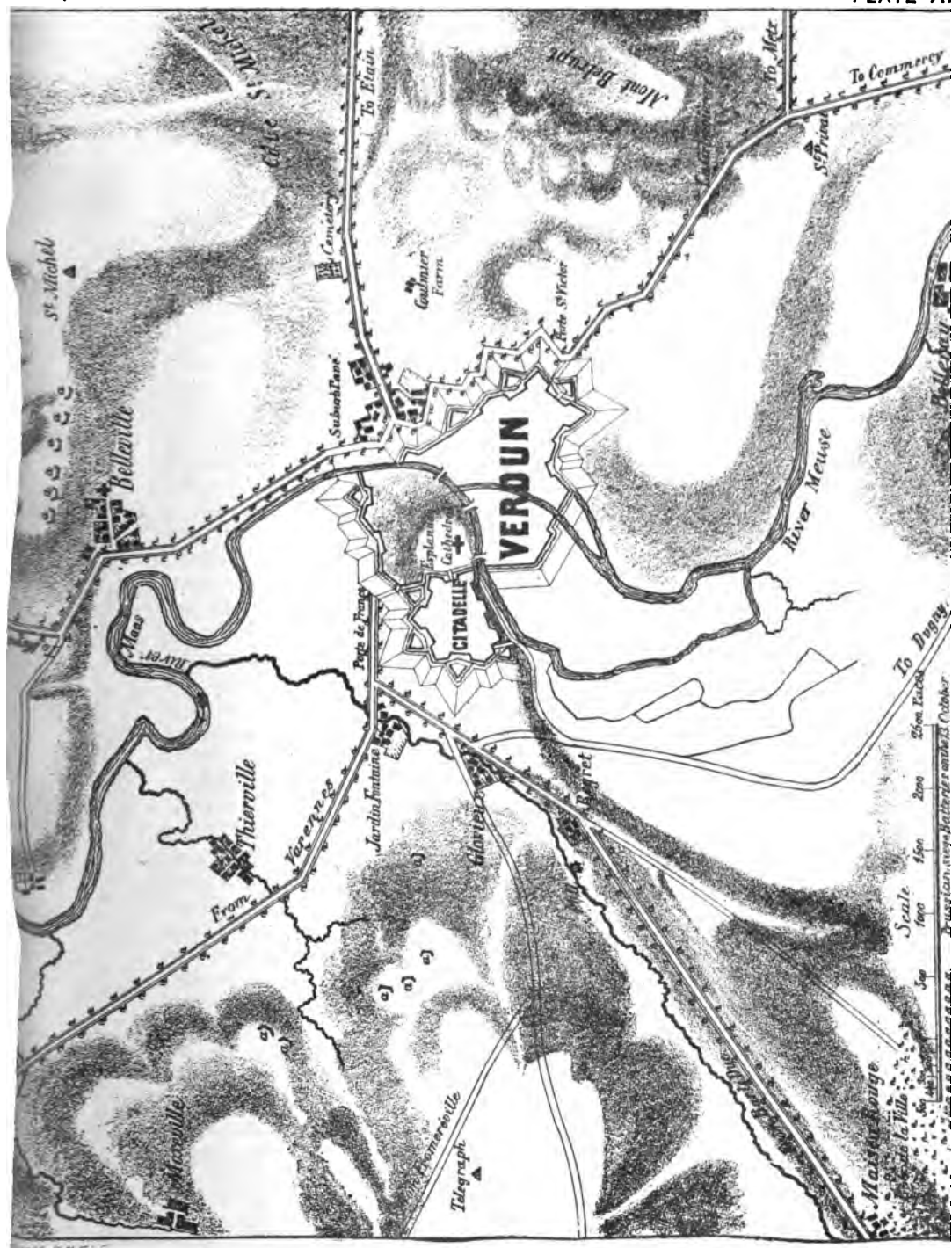
On the day of the capitulation an artillery and an engineer officer from each Prussian army corps, with non-commissioned officers, were told off, in the first instance, to take over the powder magazines and destroy any mines that might exist. Next the forts were occupied, each by two battalions of infantry, a company of garrison artillery, and a detachment of pioneers (engineers); then the gates of the town, and finally the town itself, were taken possession of. Steps were immediately taken for restoring the 10 kilometres (6 English miles) of railway from Metz to Courcelles, and the very first train that ran into Metz brought, to the great delight of the inhabitants, 1,000 sheep into the fortress. At the same time German forethought was brought into action for the benefit of the town and fortress, by the immediate appointment of an extraordinary sanitary commission to prevent the seeds of epidemic disease from being sown. It is to be hoped that they may also succeed, by suitable measures and arrangements with regard to the inhabitants, both as citizens and as Christians, in bringing universal contentment to the hearts of this originally German population.

## VERDUN.

(PLATE XII.)

VERDUN, a fortress of the first class, with 12,000 inhabitants, lies deep in the Meuse valley, on both sides of the river. On the north and east the town is enclosed by heights, within gunshot, which fall with steep slopes towards the right bank of the river. The low ground lies chiefly on the left bank, and is severed in two parts by a ridge which extends as far as the town, affording an extensive view over it to the north and south. The latter was in part placed under water. This range in a westerly direction, as well as the bare unprotected hills on the right bank of the Meuse, afford favourable positions for artillery. The stream, which during a great part of the year is very shallow, flows through the town in two branches, and is on this account crossed by many bridges.

The fortifications are perfectly simple: on the north and south are bastioned fronts; the enceinte on the east is of a similar trace, and on the west is the citadel, commanding all around it, and connected with the fortifications of the town by lines constructed for the purpose. Between the town and citadel is the esplanade, which stands high and affords a view over the town. Excepting several ravelins, there are no outworks. The ditches are partly wet, but revetted with masonry, and all the profiles are such that the place must be considered secure from assault. The kernel of the defence is the formidable citadel. It was entirely rebuilt by Marshal Vauban, and has now four bastioned fronts, each of which is strengthened by having a ravelin in front of it; the fifth front, turned towards the valley of the Meuse, is of considerable length. The long curtain has, therefore, been broken in the middle in order to obtain better flanking defence of the ditches in front of the bastions. The fire from this curtain sweeps the southern front of the town and some of the bridges over the Meuse. This front has no ravelin to cover the curtain. It is in fact built on the steep slope down to the Meuse. The citadel has a gate leading to the country, and one to the town. The fortifications of the town have three entrances, giving passage to the high roads from Metz, Etain, and Bar-le-duc. They are under the fire of the guns of the fortress. The ground round the fortress is generally clear for a distance of 2,000 paces, with the exception of some villages, the suburb of Pavé between the roads leading to Etain and to Metz, and some farms which played a part in the siege and, as we may as well state here, were used to very good effect







by the garrison to command the ground in front, and to facilitate their sorties. The country lying to the westward of the citadel, in our opinion the only side on which Verdun is open to attack, is covered with many vineyards. There are no detached works round the fortress, nor is there sufficient bombproof cover for a garrison of the war strength.

The occupation of Verdun was important for the armies before Paris, and for the forces operating in the West of France, because the fortress bars the direct line of railway from the "Middle Rhine" or Metz by Châlons to Paris. This railway was still in course of construction when war was declared in July 1870, and only passable for a short distance.

Thus Verdun was at that time merely a terminus. The completion of the line of railway from Verdun to Metz, even if but temporary, would have afforded great facilities to the German army before Paris for the transport of ammunition, provisions, and reserve troops, as well as for sending the sick and wounded to the rear. Verdun is also, however, regarded as a "barrier" on the road from the Middle Rhine through the Argonnes, the pass of Les Grandes Islettes, to Châlons and Paris.

The franc-tireurs, who were very active in that neighbourhood, found the fortress a *point d'appui*, which they gladly used; and the very obstinate resistance they made to those of our troops opposed to them is explained by the fact, that they hoped up to the last moment that Marshal Bazaine would break out and relieve the garrison.

Immediately after the battles round Metz, which were so fruitful in results for the German arms, the XIIth Saxon army corps was moved from the battle-fields there, by the roads Etain-Verdun or Frénes-Verdun towards Paris, and accordingly arrived in front of the place on the 24th August. An attempt was made to gain the place by a sudden attack. The field batteries with the army corps took up a position for this purpose on the heights between Verdun and Belrupt, east of the fortress, and shelled the place from 11 o'clock in the morning. Under cover of this fire, the 108th Saxon sharpshooters, with great bravery and under a heavy fire of the enemy, stormed the suburb of Pavé, which lies immediately in front of the glacis, on both sides of the road leading to Etain. First-Lieutenant von Schimpf was sent into the fortress with a flag of truce, but returned without having produced any effect. His trumpeter was shot on this occasion. General Marmier, commandant for the time being, replied that he would rather be buried under the ruins of the fortress than surrender it. As further proceedings against the fortress were impracticable, and the advance on Paris could not be delayed, the army corps at once continued its march, and crossed the Meuse, both above and below the fortress, the same day, leaving the 47th infantry brigade behind to observe the place.

The action had shown that the fortress was secure from assault, defensible, sufficiently garrisoned, and fully armed with heavy garrison guns.

A provision or ammunition train, under the impression that the place was already in our hands, went straight into the fortress and fell into the possession of the garrison. The same thing happened to a field post coming from Sedan.

On the 7th September the above-mentioned detachment was relieved by a stronger one under the command of Lieutenant-General Bothmer. The latter consisted of the 65th regiment (5th Rhenish), the 4th (Schleswig) reserve hussars, the 9th ulan regiment (2nd Pomeranian), and two horse artillery guns, with a heavy reserve battery of the VIIth army corps. Of these the ulan regiment and the subdivision of horse artillery were told off for the left bank of the Meuse, but soon recalled, while the rest of the detachment undertook the investment of the fortress on the right bank of the Meuse. Of this force, moreover, the 1st battalion of the 65th regiment was ordered off to guard the communications between Sedan and Montmedy; so that under these circumstances the investment of the fortress was but very incomplete. Meanwhile, artillery matériel was brought up from Toul and Sedan. As the place was not completely invested, it was impossible to prevent the garrison from receiving considerable additions from stragglers and escaped prisoners, and from being well informed as to what took place outside the fortress.

On the 15th September a slight engagement took place at Maxeville. A foraging expedition, consisting of the 7th company of the 65th regiment and a subdivision of hussars, were attacked by four French companies and a squadron of Chasseurs d'Afrique. The things that had been requisitioned were brought off in safety, but the infantry lost 8 killed and 15 wounded.

*September 18.*—The same company had another collision with three French companies that had advanced at daybreak against Belleville. They were repulsed by the Prussians, who lost 8 men killed and wounded. The artillery of the garrison took part in the action towards its close with some effect.

On the 23rd September four Rhenish landwehr battalions (Aix-la-Chapelle, Jülich, Simmern, and Andernach), a reserve ulan regiment, and a heavy battery of the 8th brigade of artillery joined the investing force. In consequence of this reinforcement the fortress was more closely invested, especially on the left bank of the Meuse. On the promotion of Lieutenant-General von Bothmer to the command of the 13th division, Major-General von Gayl, commanding the 2nd infantry brigade, took over the command of the besieging force. His headquarters were situated in the village of Charny on the Meuse.

On the 24th September the 10th company of the 65th regiment was attacked at Charny by French infantry in superior numbers and a squadron of chasseurs, who were, however, driven back into the fortress with the help of a reinforcement brought up in haste from Bras. The loss on our side amounted to four men.

On the 25th September the two batteries present with the investing force shelled the south side of the fortifications of the

town and the citadel with about 200 shells, and this fire was answered briskly from the fortress. A sortie was repulsed.

In the night of the 25th-26th September some emplacements were made, near Belrupt and elsewhere; but the work was very difficult, on account of the rocky nature of the soil.

On the 2nd October several French companies and a squadron of chasseurs attacked the 6th company of the 65th regiment, but were once more beaten back into the fortress after a hard fight.

Owing to the comparatively small numbers of the investing force it was not possible to drive the very energetic and active enemy altogether into the fortress from his positions outside. He remained in possession among other places of the villages of Thierville and Regret on the west of the fortress, both of them commanded from the citadel.

On the 2nd and 3rd October, therefore, a heavy cannonade was opened upon these places by the reserve battery of the 8th brigade of artillery, as unceasing alarms were given, and small skirmishes took place along the whole line of the investment. By their possession of several positions within these, but still outside the fortress, the French were able to bring on these engagements and carry them through successfully; so that it became absolutely necessary to take possession of the outer lines of the French position. Accordingly the attack on Thierville was forthwith ordered, and on the 11th October the duty was assigned to the 1st battalion of the 65th (Rhenish) regiment, which had returned to Verdun the previous day from its detached duty of guarding the communications to Sedan. The village was occupied by three companies of gardes mobiles. The battalion named advanced in three columns, threw themselves with a shout on the pickets, and upon the approach to the village, and after a few short struggles in one or two places, drove the garrison out of the village. After the battalion had secured themselves there with field-works, barricades, and shelter-trenches, and the 4th company had taken up a position on the Weinberg, south-west of the village, the enemy came out of Verdun by Jardin Fontaine and endeavoured to recapture the village. This attempt was repulsed after a short struggle. The 1st battalion of the 65th regiment lost two killed and one wounded in the taking of Thierville.

During the 12th October a great number of French stragglers were captured in and round Thierville. These men were unable to reach the fortress, where they hoped to be well received. On the evening of this day the 3rd and 4th companies of the 65th regiment, under the command of Captain Michaelis, received orders to take possession of the suburb of Jardin Fontaine, which lies close in front of the glacis of the fortress. Whilst the 2nd and fusilier battalions at the same time occupied some other places within short range of the fortress, such as Regret, Belleville, Glorieux, the farmhouses of St. Barthelemy and Constantine on the right bank of the Meuse, a heavy and continuous musketry and artillery engagement took place at Jardin Fontaine, in which the defenders were powerfully supported by the fire of the

artillery, musketry, and mitrailleurs of the citadel. After a nocturnal engagement of 1½ hour's duration they succeeded, however, in establishing themselves in the village and barricading it. Thanks to the darkness and the bad shooting of the French, the loss of the two companies of the 65th regiment employed in the attack amounted only to 1 killed and about 20 wounded. It was not till after these engagements that the fortress could properly be said to be bombarded. The cannonade was now to commence from two sides, and the following batteries had to be built:

1. To the north of Verdun, on the heights of Belleville, six batteries, which, beginning on the left, were armed with

- 6 Prussian rifled 6-pounders
- 6 French rifled 12-pounders.
- 4 22-centimetre howitzers.
- 4 French rifled 24-pounders.
- 4 French rifled 24-pounders.
- 6 French rifled 12-pounders.

2. On the west of Verdun, on the left bank of the Meuse, on the heights of Thierville, five batteries armed with

- 6 French rifled 12-pounders.
- 6 French rifled 12-pounders.
- 6 French rifled 24-pounders.
- 6 Prussian rifled 6-pounders.
- 4 French heavy mortars.

The construction of the batteries took place on the night of 12th-13th October under unusually difficult circumstances. The weather was wet and stormy, so that the enemy did not discover the works. The time had been too short for the preparation of all the battery materials that were required. For the heavy guns there were only improvised platforms, for the lighter ones there were no platforms at all. There was a want of entrenching tools, and the stiff, and in part rocky ground, had generally first to be loosened with the pickaxe. Moreover, the rifled 24-pounders did not arrive from Sedan till 1 o'clock in the morning, and then they were in the travelling trunnion holes. There were no gysns, and thus the work of bringing them into the firing trunnion holes, and placing them in battery, seemed endless. But in spite of all, the whole of the guns were ready to open about 6 o'clock in the morning, and about this time the fire began with a "hurrah" for his Majesty the King.

The high buildings in the citadel were indicated as the object for the 24-pounders in the first instance, and secondly the guns on the ramparts. An attempt was then to be made to breach a part of the high escarp wall. The rifle 12 and 6-pounders had orders to draw upon themselves the fire of the enemy's guns, and if possible to silence them, and also to oppose any sorties that might be attempted. The heavy howitzers and mortars, lastly, were told off to bombard the town itself, in order to bring pressure to bear on the commandant through the inhabitants.

The construction of the batteries was carried on without interruption from the enemy's fire, and even the first few rounds were unanswered. But it was not long before an enemy not to be despised appeared on the whole of the fronts attacked, and he did not remain in our debt, but paid us back shot for shot. We succeeded, however, during the first afternoon, in setting fire to several magazines; guns were silenced here and there, and in many places the town burst into flames, but no white flag was shown to announce a surrender, though the bombardment had lasted day and night for fifty-four hours. Owing to the great distance, on an average 2,400 paces, and to the inaccuracy in shooting of the heavy French guns, the breach could not be reported practicable, so that there was no opportunity for the action of the infantry. The garrison artillery were very active, shot well, and repeatedly brought fresh guns into action. The bombardment above described, which cost the siege corps 6 officers, 5 of them belonging to the artillery, and between 60 and 70 men killed and wounded, had at length to be stopped, partly owing to the want of ammunition, partly owing to the want of suitable artillery, for the pieces found in Sedan and sent to Verdun proved themselves in practice to be inefficient. Preparations were made, therefore, as quickly as possible, for obtaining reinforcements of guns and gunners.

Nevertheless an attempt was made, by sending a flag of truce, to induce the commandant, General Guerin de Waldersbach, to surrender the fortress, but without result. The commandant, on the contrary, begged the commander of the besieging force, Major-General von Gayl, to desist from the siege, as both the garrison and the citizens were ready to do their duty to the last moment. A fitting reply was made to the French commandant.

On the 18th October a military execution took place on the person of a French notary named Violard, who was convicted of treachery to the Prussian troops, and was shot at the village of Bras. At the same time the outposts at Maxeville discovered a balloon-post, which conveyed letters addressed to the Government at Tours; but it could not be caught.

Meanwhile the technical preparations for a regular siege, specially adapted for hurried operations, were taken in hand. Considerable supplies of ammunition and of Prussian siege guns were brought in to the artillery siege park. The garrison continued their energetic defence, and made, on the 28th October, at break of day, two simultaneous sorties against the Prussian batteries on the north and on the west of the fortress. In the first the enemy attacked the village of Belleville on both sides. The companies of the 65th regiment posted there, after being reinforced, drove him back, but unfortunately with a loss to themselves of an officer and 52 men killed, wounded, and missing. The destruction of the batteries contemplated by the enemy on this occasion ended in their rendering unserviceable only one gun that was already on a dismounted carriage. In the other sortie, which was directed against the batteries near Thierville, the French were more fortunate, for

they succeeded in spiking the guns there. The loss at this place on both sides was not inconsiderable. The disabled guns were, however, made serviceable again on the same day.

The fall of Metz rendered it practicable to send important additions in troops and guns to the siege corps at Verdun. The 60th regiment (7th Brandenburg), the 8th jäger battalion, and the 8th Rhenish pioneer battalion came up. The corps was altogether 15,000 strong, including 2,000 artillerymen. Colonels Meissner and Riedel were nominated to the commands of the siege artillery and engineers respectively. All the technical preparations for a regular siege were put in hand at once. Additional materials for trenches and batteries were made ready, timber was cut for blindages, railway metals were sent up, and so on. 140 guns with their equipment of 1,000 rounds were on the spot.

During these preliminary arrangements the commandant intimated his willingness to enter into negotiations for surrender, which seemed to be justified since the fall of Metz, in order to avoid bloodshed and the destruction of the town. For this purpose an armistice was granted for eight days, and on the 8th November the capitulation of the fortress and town of Verdun followed.

Two generals, 11 staff-officers, 150 officers of lower rank, and about 4,000 men were made prisoners; 136 guns, 23,000 stand of arms, a number of excellent Arabian horses, and very considerable amounts of military stores were found.

The terms of capitulation were made very favourable for the enemy, in proof of which we here subjoin them.

*"Article I.* The fortress and town of Verdun, with all warlike stores, stores of every description, official records, and all public property are to be given over on the 9th November to General von Gayl in the condition in which everything is at the moment the convention is signed, on the express understanding that they are to be restored to France after the conclusion of peace. On Wednesday, the 9th November 1870, at 10 o'clock in the morning, the town and citadel of Verdun are to be given over to the Prussian troops. At the same hour artillery and engineer officers, with some non-commissioned officers, will be admitted to the place to take charge of the powder magazines and unload the mines.

*"Article II.* The garrison are prisoners of war; but the gardes mobiles, natives of Verdun, and the domiciled gardes nationales shall be free after laying down their arms, and none of the defenders of Verdun shall be molested. The gendarmes shall be free after laying down their arms, and shall keep their horses. The master-tradesmen of corps shall not be considered as soldiers, and are likewise free.

*"Article III.—*The arms, and all warlike stores, consisting of guns, stores, military chests, waggons, ammunition, &c. shall be left in Verdun, in charge of a military commission, which will be appointed by the General-Officer Commanding, and they shall

at once hand these things over to Prussian commissioners, to revert to France on the conclusion of peace. The troops disarmed will be marched by corps in order to the places appointed for each. They retain their knapsacks and property.

*"Article IV.*—The officers and persons of that rank who select imprisonment, and give their word of honour to present themselves on a fixed day at a place previously appointed, are free, but only to betake themselves to such places. All retain their arms, their horses, and property.

*"Article V.*—The military surgeons remain behind to treat the wounded. They are to be treated according to the convention of Geneva, as are also the attendants of the hospitals.

*"Article VI.*—The town of Verdun remains free from all war tax and contribution in money. Persons, property, civil and religious institutions will be regarded. As far as possible the troops will be quartered in the military buildings, except in case of an extraordinary number passing through.

*"Article VII.*—All public establishments, the civil and commercial courts, the notariat, trade, and industry remain freely in operation.

*"Article VIII.*—Separate points that hereafter present themselves shall be regulated by an appendix, which shall have the same force as the present convention."

There is no doubt that perfectly clear reasons have been given for this surrender, extraordinarily favourable as it was to the enemy, but they have not yet been published. Before Verdun the combatants on both sides had learnt to know one another, and were convinced that a siege would have cost much time, matériel, and troops. Under the circumstances then existing both matériel and troops could be turned to better account.

In the citadel much damage had been done, a straw store was burnt, and, generally speaking, all the buildings that it was possible to destroy had been destroyed. The parts of the town near the fortifications had also suffered much; but the principal streets, and even the lofty cathedral with its observatory, remained uninjured by Prussian shells. The temper of the citizens was in accordance with the circumstances of the case. They had not this time any reason to fear such things as happened after the taking by the Prussians in 1792, when several officers gave a ball, and the revolutionary tribunal caused fifteen young girls to be guillotined—the youngest only seventeen years of age—because they had danced with Prussian officers.



## SOISSONS.

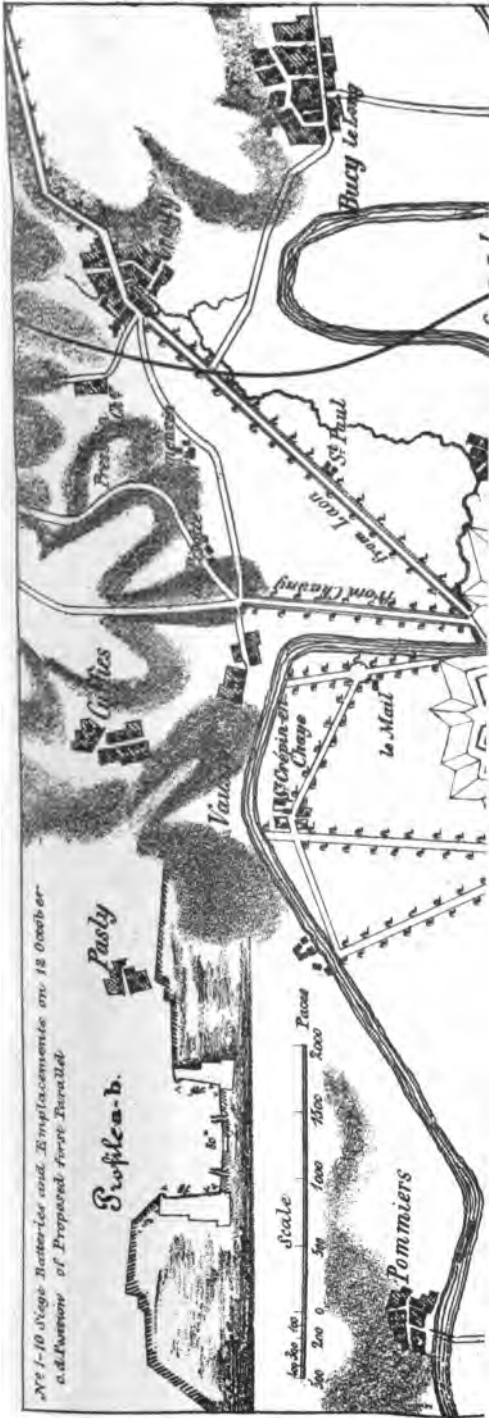
(PLATE XIII.)

FOR the advance of the German Army on Paris, as well as for their further operations in the north-west of France, it was of the highest strategical importance to have possession of the railway which goes northward from Paris to Soissons, by Nanteuil, Crepy, and Villers-Cotterets, and the road-junctions at Soissons, Chauny, Compiègne, Villers-Cotterets, and Château Thierry.

Soissons is a pleasant manufacturing town with 11,000 inhabitants, and has three gates, through which pass the roads to Compiègne, Laon, and Mézières. The railway is to the south-east, and within range of the guns of the fortress at a distance of 1,500 paces. The Aisne, rising in the forest of Argonne, and washing the town on the east, is here never more than 100 paces broad, and on the south of the fortress receives the rather deeply sunk stream of the Grise. The Aisne is connected with the Ourcq canal, which, as is well known, discharges itself into the St. Denis canal, near Paris, about fifteen miles (70·2 English miles) from Soissons.

On the left bank of the Aisne the fortress consists, on its east side, of a defensible wall, some twenty feet high, on which the north and south fronts terminate. These, as well as the west front, are formed of a number of irregular bastions, with long connecting lines or curtains, strengthened only on the north-west by ravelins in front. Well-protected sluices afford the means of filling the ditches with water when the place is prepared for a siege, thus rendering them impassable. In time of peace the ditches are dry.

Recently the south-west front, which is defensively the weakest, has been appropriately strengthened by the addition of a large hornwork placed on some high ground which falls steeply towards the country. Nearly in the centre of the east front a massive bridge, of great beauty architecturally, crosses the Aisne to the suburb of St. Vaast, which is enclosed independently by fortifications, and serves as a bridge-head. The remaining suburbs—St. Christophe on the west, De Grise and De Rheims on the south-west—are much built over, and hence of some disadvantage defensively, since they interfere with the fire of the guns of the works behind them. There are some bombproof powder magazines in the fortress, but bombproof barracks are entirely wanting, which is a serious disadvantage to the garrison. The profiles and the details of the works are such that the place is secure from a coup-de-main. The ground close round Soissons is a good deal cut up



PROTOTYPE S.M.E



by valleys on the south-west and south-east, but elsewhere flat and partially clothed with plantations; further off, however, to the north on the plateau of Pasly, to the east at Crouy and Ville-neuve, it is covered with groups of houses, parks, and vineyards. On the south, at Belleu and Vauxbuin, it is favourable for the operations of an investment, for the roads here leading to Soissons can easily be converted into defensible defiles and trenches. Some of the heights, especially near Vauxbuin, are within such distances of the fortress that they afford advantageous artillery positions for our long-range rifled guns, and are, therefore, exceedingly well situated for the bombardment of the fortress. There are also some places from which the escarps are visible down to the foot of the wall at the bottom of the ditch.

After the battle of Sedan the army of the Meuse resumed its march towards Paris, and consequently the head of the IVth Prussian army corps belonging to that army arrived before the fortress on the 11th September. Major von Wittich, of the general staff, was sent into the fortress with a flag of truce, to ask the Commandant to evacuate the place. The latter received him politely, but decisively rejected the proposal. The fortress was put into as good a condition for defence as time and circumstances permitted, by cutting down the trees on the glacis, barricading the entrances, clearing the lines of fire, and demolishing the suburbs and railway. The commandant had destroyed the passage over the Aisne valley by the fine suspension-bridge at Vailly. The overflow of the Aisne into the lower basin of the ground liable to inundation put the country as far as Bucey-le-Long under water. The place could not, therefore, be taken without special preparation. As the advance on Paris was ordered to be hastened, the columns of the IVth army corps on the march were directed for the time to pass round the place, and it was thought sufficient to observe it until the arrival of the 2nd landwehr division, under the command of Major-General von Selchow, who were told off for the investment. They eventually came in the latter part of September. The divisional headquarters were fixed in La Carrière de l'Eveque. Owing to the paucity of troops, the investment of the fortress was incomplete in its earlier stages; the right bank of the Aisne was almost entirely open to the French, so that they frequently sent out foraging parties there. Small engagements of the patrols were ineffectual to prevent this evil. The investment of the fortress, however, was accomplished, in the face of continual and repeated sorties and alarms of the outposts by the garrison. An affair of this kind on a large scale took place on the 28th September, and the enemy was repulsed by the landwehr battalions of Landsberg, Frankfurt, and Woldenberg. The garrison were consequently compelled to beg for a truce to carry off their killed and wounded, whilst our loss was but very small. Meanwhile the siege corps was formed of nine landwehr battalions, comprising those of Frankfurt, Küstrin, Landsberg, Woldenberg, Brandenburg, Ruppín, Prenzlau, and Jüterbogk, with the addition of the Halberstadt heavy reserve cavalry regiment, a squadron of the 1st Mecklenburg dragoons

a heavy and a light reserve field battery, three companies of the 2nd, 4th, and 11th regiments of garrison artillery, and a company of Schleswig garrison pioneers (engineers), as well as the pontoon company of the 9th battalion of pioneers (engineers). Major-General von Selchow commanded the siege corps, Colonel Bartsch the siege artillery; Colonel Braun, of the staff of His Royal Highness the Grand Duke of Mecklenburg Schwerin, was the Chief Engineer.

In spite of repeated engagements with the energetic garrison, who, by a skilful use of the ground, impeded the advance of the siege corps, and, particularly on the 3rd and 9th October, brought on sanguinary actions for the possession of the villages of Crouy and Cuffies, the investment became by the 10th October close and complete. The enemy was forced into the interior of the fortress, and, owing to the energy he had shown, it was necessary to barricade, and put into a condition for defence, the nearest villages and farms, especially the Ferme la Perrière. This was no difficult matter, as it was solidly built and suitable for defence. In order to connect the sections of the besieging force on both sides of the Aisne, the river was bridged at Pommiers and Venizel. On the following days the heavy guns from the batteries before Toul arrived. The park of artillery consisted of

10 24-pounders	} Rifled Prussian ordnance.
16 12-pounders	
2 27-centimetre	} French mortars.
4 22-centimetre	
4 15-centimetre	

Total 36 pieces of siege artillery.

Materials for the construction of the batteries were also brought from Toul. The southern side of the fortress was found, on being reconnoitred, to be particularly well-adapted for bombardment. The following batteries were constructed:—

Battery No. 1. Emplacement for field guns.

Battery No. 2. Enfilading battery, 4 24-pounders.

Battery No. 3. Mortar battery, 2 27-centimetre and 4 22-centimetre mortars.

Battery No. 4. Breaching battery, 6 24-pounders.

Batteries Nos. 5 & 6. Two dismounting batteries; together, 12 12-pounders.

Battery No. 7. Dismounting battery against the hornwork and the flanking casemates at the gate to Compiègne.

Battery No. 8. Emplacement for field guns.

The two emplacements were occupied by the two reserve batteries present with the siege corps.

On the morning of the 12th October the bombardment began in the presence of H.R.H. the Grand Duke of Mecklenburg, who had supreme command over the siege corps, and of His Highness the Duke of Saxe-Altenburg. The construction of the batteries had been proceeded with during the previous night

without interruption from the enemy, but with much difficulty from the rocky nature of the soil. Before long the garrison artillery replied briskly from 16 or 18 guns to the fire of the besiegers, so that some of the batteries had to abandon their original objects, and join in the fight against the artillery of the garrison.

*October 13.*—It had been observed that the French artillery had been very busy on the ramparts during the night, and had put new guns in position. The garrison opened fire with the same energy as on the day before. Out of regard for the great sufferings of the town a flag of truce was sent into the fortress at 2 o'clock in the afternoon, but all proposals for a surrender were rejected; consequently the fire was continued.

*October 14.*—The artillery continued the engagement. The breaching batteries produced the best results. On the previous night gun-emplacements Nos. 9 and 10 were constructed, and on the other hand batteries Nos. 1 and 8 were removed, because the fire of the neighbouring fronts of the fortress had been concentrated on them. These gun-emplacements were so situated that the direct fire of the works opposite to them could do them no serious injury.

*October 15.*—During the night the enemy had been at work at the breach that had been effected, though an incessant fire upon it was kept up, and had repaired the damage, in full expectation of an assault. The breach was in fact practicable, the wall had been demolished for a length of 45 or 50 paces, and the earth of the parapet had fallen down, and formed a ramp into the dry ditch. There was no masonry counterscarp there, a circumstance that was so far of importance, that it would have facilitated an assault of the breach, if necessary. In order to be able, in case of need, to proceed with an abbreviated regular attack, it was intended to construct close to La Buërie a portion of a parallel, which might eventually have been used in connection with the so-called "second batteries," and to afford cover to the assaulting columns. This parallel was conveniently situated, as regarded the breach that had been made opposite to it, some 800 paces off, the projected gun-emplacements Nos. 9 and 10 being about 100 paces in rear.

Arrangements had been already made for the assault, when, on the 15th October, a French flag of truce arrived, with a request that an officer might be sent to negotiate for a surrender with the Commandant, General Denué. By order of H.R.H. the Grand Duke, Colonel von Krensky, Chief of the general staff of the XIIIth army corps, and the Count von Schlieffen, Captain on the general staff, were appointed to conduct these negotiations; and these officers returned at 2 o'clock in the morning of the 16th October, to the headquarters at Venizel, with the capitulation concluded. The distress and want in the town, whose citizens were not prepared for a siege, had apparently hastened this capitulation. The fire from our guns had caused great havoc

in the place, and made it almost impracticable to continue the duty on the ramparts. It may be observed, in reference to the first, that the arsenal and other military buildings, as well as the large hospital, had been destroyed by fire, and with regard to the latter, that a very large proportion of the guns on the ramparts were found to be dismounted. This state of things and the existence of a practicable breach must have been the immediate causes of the request of the commandant for a capitulation.

On the 16th October, at 2 o'clock in the afternoon, the German forces occupied the gates, and the garrison, about 4,000 strong, gave themselves up on the glacis: 128 guns, including many pieces damaged, without side-arms, or destroyed, 70,000 shells, 3,000 cwt. of powder, a military chest with 92,000 francs (about £3,680), and a quantity of clothing and equipment stores, were the spoil of the victors. The troops marched past in front of the cathedral before H.R.H. the Grand Duke, who placed himself in the square formed by the soldiers, caused them to present arms, and took possession of the fortress, with three cheers for His Majesty the King. H.R.H. the Grand Duke of Mecklenburg thereupon proceeded by Rheims to Paris. In spite of the heavy fire on both sides, the siege artillery had to lament the loss of only 3 killed and 27 wounded.

## LA FÈRE.

(PLATE VI.)

AFTER the capitulation of Metz the 1st army received orders to invest the fortresses of Thionville, Longwy, Montmedy, and Mézières, and to overthrow the newly raised armies of the enemy in the North-west of France.

At La Fère the roads from Cambray and Amiens meet. The place itself lies on the highroad, which leads from Laon by Compiègne to Paris, and also on the Crozat canal, which can be used as a communication by water from Paris by Valenciennes to Antwerp. The railway from Laon to Paris passes by the place on the south, and goes thence westward to Tergnier. From here the lines northwards to Amiens, Cambray, and Valenciennes branch off.

In considering the important and influential position of the little fortress of La Fère, 4 miles ( $18\frac{1}{2}$  English miles) north of Soissons, with regard to the operations of the 1st army, Baron Manteuffel, general of cavalry, its commander, could have no doubt that the place ought to be taken as soon as possible, since it barred the communications above mentioned.

La Fère has 5,000 inhabitants, and was formerly the seat of an artillery school of established reputation, whence have proceeded the most famous generals in this branch of the French army. The place is of no importance otherwise. The fortifications of La Fère, a fortress of the second class, consisted of a high town-wall, arranged for defence, in the manner of the middle ages. The deep ditches in front of this wall are flanked by towers—some half-round, some half-angular—or by flanks in the escarp. On the west, north, and east, this town-wall is covered from direct fire by an earthen parapet of weak profile and irregular trace. Before the introduction of rifled guns of long range, and of indirect breaching-fire, this may have sufficed, but now the town-wall, in spite of the earthen parapet, can be got at from great distances. The passages over the Oise and the Crozat canal are covered by a little redoubt made like a bridge-head.

The fortress was as well and completely prepared for a siege as one could expect. It should particularly be observed that the Oise was dammed up, and thus an extensive and effective inundation was caused over the meadow-ground, which was favourably situated for that purpose. This low ground is only about a quarter of a mile (2,060 yards) wide close to the fortress, but becomes broader on the north and south, and extends to the east and west as far as some gently sloping heights; and these, more particularly



on the eastward, permit a complete view into the fortress, and afford very well-placed sites for batteries, whence the place can be effectually shelled.

In order to hurry on as much as possible the investment of La Fère, the 4th infantry brigade, under the command of Major-General von Zglinitzky, was sent on at once from Metz by rail to Soissons, to march thence by road, on the 14th November, to take up the ground before La Fère. The brigade comprised the 4th and 8th East Prussian regiments, a squadron of the 10th dragoons, and a heavy battery of the 1st regiment of artillery. In addition there were attached to the force a company of pioneers (engineers), six companies of garrison artillery, with 16 siege-guns (four 24-pounders and twelve 12-pounders) and six 22-centimetre mortars. The companies of artillery belonged to the 2nd, 4th, 11th, and guard regiments of garrison artillery.

On the 15th November La Fère was closely invested, and, after repeated reconnaissances of the fortress, the south-east front was selected for attack. Far in advance of the head of the army to which he belonged, surrounded by an irritated and excited population, in the midst of hostile forces in process of formation, the task of Major-General von Zglinitzky was no easy one. Great prudence was required, for the detachment had to be so placed round the fortress that it could at any moment front either way. In fact, on the 20th November it was attacked, on the right bank of the Oise, by six companies of the enemy, with four guns, at Menessis, in the country near Tergnier. The battalion of the 5th regiment, stationed there, succeeded, however, in repulsing the attack, with considerable loss to the enemy. Apparently in connection with this fight, the garrison at the same time attempted a sortie, without deriving therefrom any advantage whatever.

Meanwhile the siege-guns, mentioned above, had arrived before the place, chiefly from Soissons, and preparations for a bombardment were begun by getting ready some materials for the construction of batteries. The siege-park was formed at Rogecourt, a place situated on the railway, in a valley nearly three-quarters of a mile (6,178 yards) east of the fortress.

On the evening of the 24th November progress was made with the construction of the batteries, and they were at once armed. The enemy did not interfere with this work, so that on the morning of the 25th November, at half-past eight o'clock, the fortress was bombarded from seven batteries, which were built on the heights of Danizy, west of the place of the same name, on both sides of the road to Pont-à-Boussy. The fire was directed not only against the positions of the enemy's artillery on the works, but also against the railway station lying on the south side of the Faubourg Neuf, which had been barricaded, fortified, and rendered impassable by blowing up two bridges. The north front was also enfiladed, so that with these dispositions it was impossible to avoid at the same time bombarding the further portion of the town. The garrison replied with vigour to the fire of the siege-batteries, which did terrible havoc in all directions.

They had placed 24 guns on the front attacked, and had changed the positions of their artillery. Soon the town was on fire in several places, and the distress there was the greater, because there were no cellars in which the inhabitants could take refuge. The garrison was entirely without bombproof cover of any sort, the only barracks in the place were soon in flames, several magazines caught fire, the gate of the fort towards Laon was shot to pieces, and the fronts attacked were seriously damaged. Under these circumstances the commandant, Captain Planché, who belonged to the navy, after a 30-hours' bombardment, could hold out no longer. He gave up the fortress on the 26th November, and thus 2,000 prisoners, chiefly garde-mobiles, 113 garrison guns of different calibres, with their ammunition, 5,000 stand of arms, and other military stores, fell into our hands. As La Fère contained an artillery arsenal, large stores of projectiles, lead, iron, and timber also became ours as spoil of war. The entry into the fortress was made on the 27th November.

Under the circumstances it was necessary at once to provide La Fère with a sufficient garrison, and to put it again in a condition of defence, so far as was practicable with the means available. For this purpose it was of the first importance to repair the very serious damage that had been done by the bombardment to the ramparts and gateways. The proximity of the enemy made this especially necessary. In fact, on the 16th December, French columns appeared before the fortress, whence, to the number of 3,000 or 4,000 men they pushed on, crossing to the left bank of the Oise with the apparent intention of attacking Laon. The enemy, however, soon went back again without attempting to invest La Fère, to recapture it, or even to threaten this important railway junction.

## THIONVILLE.

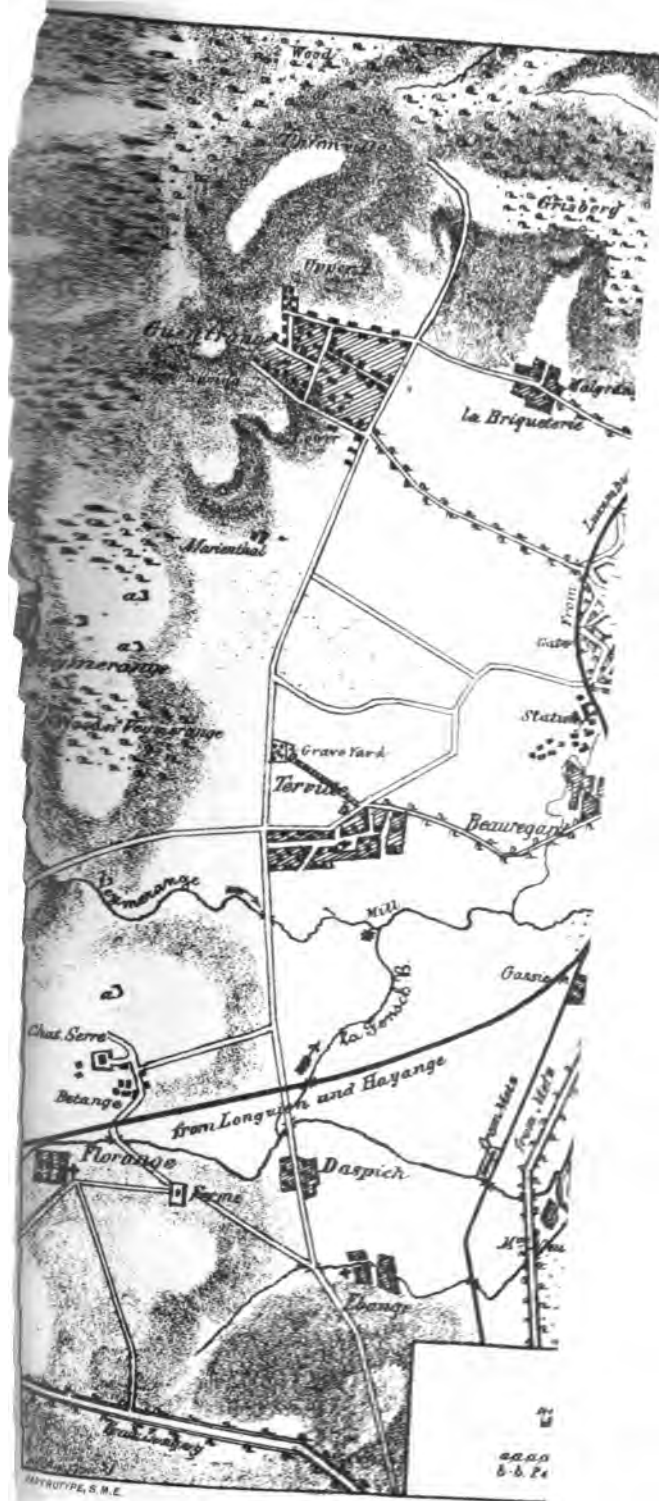
(PLATE XIV.)

THIONVILLE, or Diedenhofen, a place with 7,800 inhabitants, is the most northern of the French strongholds on the Moselle, and with it commences the line of fortresses—including Longwy, Montmedy, Sedan, Mézières, and Rocroy—constructed as a protection against attacks through Luxembourg and Belgium.

The fortress was constructed at various epochs. It has been built from designs, partly by Vauban, and partly by Cormontaigne. It consists of three chains of defences, being the main work and a bridge-head on either side of the Moselle, and a work called 'Le Fort,' on the right bank of the arm of the Moselle, which branches off to the south of the place, and is used as a canal. On the left bank of the river lies the main work within the town, which has two gates, one on the north and one on the south, leading respectively to Luxembourg and Metz, and contains the great arsenal and a considerable store of provisions. Four regular bastioned fronts are joined to the Moselle by connecting lines, which on the lower side are strengthened by a complete and independent hornwork.

Ravelins, counterguards, and a system of lunettes at the foot of the glacis give the place considerable defensive strength. The gorge of the fortress along the Moselle is closed by an indented defensible wall. A massive bridge of five arches spans the Moselle, here 150 paces (123½ yards) wide, and leads into the fortifications of the bridge-head, which consist of a flat elongated crown-work. This work has three bastioned fronts, with counterguards and lunettes at the foot of the glacis in front of the flank bastions. The ditches are wet. Three bridges, or locks, lead over the arm of the Moselle used as a canal, already mentioned, to the right bank and into the strong crown-work of Le Fort, there situated. This consists of two bastioned fronts, provided with ravelins, and with cunettes in the ditches. The roads from Metz, Bouzonville, Saarlouis, and Sierk-Trèves, debouch into this work. Outside the fortifications the French held the villages La Grange, Malgrange, and others, situated in the rayon of the fortress.

Thionville commands the Moselle, and the important high-roads to Metz, Longwy, Luxembourg, and Saarlouis. Moreover, the place is an important railway junction, for the line leading



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from Luxembourg to Metz is joined on the south of Thionville by the railway from Longuion to Benning. Under these circumstances Thionville was drawn into the sphere of the military operations, as soon as the German armies crossed the frontier. It lay in the district in which the 1st army operated, and as early as the 8th of August an advanced party was sent against the place from the VIIIth army corps. As we were in contact with the enemy after the battles of Forbach and Spicheren, and knew that he had gone to Metz, Thionville was only observed at first, and it was not till after affairs had become more settled at Metz that the fortress was so far invested, that all communication with the place was cut off. At first the troops in observation consisted only of three squadrons of the 2nd reserve cavalry regiment formed at Deutz, who wore the uniform of cuirassiers, and were armed with lances. Then came, in passing, the landwehr battalions of Kummer's reserve division, the 2nd (Thuringian) regiment, the 94th (Oldenburg) regiment (to which two guns were attached), the 10th (Lauenburg) jäger battalion, the 3rd reserve hussars, and lastly, the 10th ulan regiment (1st Posen). On the south of the fortress the communication between the troops posted there was maintained by a bridge between Ucange and Bertrange.

For some time Lieutenant-General von Bothmer had the command of the troops before Thionville, but he rather observed than invested it. The operations were confined to watching the roads and destroying the bridges and telegraphs. The duty was monotonous enough for some weeks, though there were some bold and prudently conducted reconnaissances made by the garrison, which brought the German force into contact with their equally active opponents. A fight of this kind took place on the 13th September at Veymerange, west of Thionville, where the French had gone from the fortress to forage. Numbers of franc-tireurs scoured the country, kept up communication with the unfriendly inhabitants, as well as with those of 'neutral' Luxembourg, and were able in many ways to help the garrison in Thionville, and also to give them news of their enemy's movements. Thus, the French, on the 17th September, with two companies of infantry and a picket of dragoons, attacked suddenly a train of 165 wagons at Königsmachern, between Sierk and Thionville. The train was laden with oats for the Prussian army. The weak escort of six men were killed or made prisoners, and the train taken into the fortress. After fifty-eight wagons had come within the rayon of Thionville, a patrol of the 3rd reserve hussars succeeded in recapturing 107 wagons from the enemy, quite close to the fortress.

Almost at the same time as this attack, a railway-train was smuggled in with provisions, which had been collected in Luxembourg and Bettenburg ostensibly for the German army. For this purpose, on the night of the 24th-25th September, the rails that had been torn up were relaid on the Thionville and Luxembourg line; and the provision-train of sixty wagons, containing meal, rice, coffee, and sugar, was brought into the fortress, where the garrison were

to receive this consignment. The Prussian detachments on the south and west of Thionville heard of the affair, and endeavoured to prevent the unloading, but did not succeed in doing so. The whole business was arranged by the French company of the Chemin de Fer de l'Est in Luxembourg, who own the section of railway in question.

Such a lesson increased the watchfulness of the Prussian troops, and issuing from Sierk, where a Prussian garrison was stationed, they succeeded in seizing twenty provision-wagons destined for Thionville, and coming from Mondorf and Bettenburg in Luxembourg.

On the 15th and 18th October it was necessary to send a flag of truce into the fortress, and Major von Prittwitz and Captain von Eickstädt, of the cavalry, went in for this purpose. Shots were fired from the fortress at both of them.

On the 17th October the French made a sortie, but were quickly driven back again into the fortress by our men. We had fifteen wounded; the enemy carried off their killed and wounded with them into the place.

After the capitulation of Metz, the 14th infantry division, under the command of Lieutenant-General von Kamecke, took up a position before Thionville for the complete investment of the place, and thus commenced, in fact, the series of sieges of the north-eastern fortresses of France.

On the 9th and 10th of November the siege corps began its march from Metz, in two *echelons*. Besides the infantry division already mentioned, it consisted of 13 companies of garrison artillery, under the command of Major Schmelzer, 3 heavy and 2 light batteries of the 7th regiment of field artillery, 7 companies of pioneers (engineers), including 5 companies of garrison pioneers of different army corps, pontoon column No. 7, and a bridge-train captured in Metz. The pioneers were under the command of Major Treumann, commanding the 7th battalion of pioneers.

Lieutenant-General von Kamecke placed his headquarters in Hayange. He caused an observatory to be established at Châteaueserre, whence the fortress was completely seen into. At Ukange a pontoon-bridge was substituted for the ferry previously existing, and the maintenance of this bridge later on gave much trouble, owing to the rising of the waters of the Moselle.

On the 20th November, the materials required for the construction of the batteries having been previously brought up between the 14th and 18th of November, and having been prepared under the direction of the technical troops, a matter of no great difficulty in this well-timbered country, the actual construction began. The work at the batteries was partly masked by plantations, which were only removed immediately before the fire began.

On the 19th November the siege-guns, 158 in number, were all assembled.

The siege-park consisted of:—

36 24-pounders,	10 of them short,	
50 12-pounders,		
24 6-pounders	} of the field artillery,	
18 4-pounders		
8 13-inch mortars,		
4 11-inch ditto,		
18 8-inch ditto.		

—  
158 total number of pieces.

The main artillery park was in Suzange, the smaller one in Hettange-grande, and Immeldange.

On the 21st November General von Zastrow, of the infantry, commanding the VIIth army corps, arrived from Metz with his staff, in order to be present at the then imminent bombardment of the fortress. For the bombardment the following batteries had been erected:—

1. On the right bank of the Moselle, at the village of Haute-Yutz, four field batteries, three 6-pounder batteries, and one 4-pounder battery; at the wood of Illange, four 24-pounders and four 12-pounders, four 13-inch French mortars, which had been brought from Metz. These batteries fired upon the bridge-head and north-east front of the town, at a distance of about 2,500 paces.

2. On the left bank of the Moselle, at the farm of Gassion, four short rifled 24-pounders. Here also four rifled mortars should have been placed, but were not put in position for certain reasons. This 24-pounder battery was established by a detachment from the artillery school of gunnery at Spandau. At Château-Serre, a 24-pounder 4-gun battery; on the left of the castle, a similar 24-pounder battery. These batteries fired upon the north-west front of the town, at a distance of about 5,500 paces. In the wood of Veymerange, a battery of short 24-pounders; in front of Veymerange, two batteries of 12-pounders for four guns each. These three batteries were for the bombardment of the town, at about 4,000 paces' distance. At Maison-rouge, in front of Hettange-grande, were three 12-pounder batteries, each for four guns. These batteries fired upon the town at 3,900 paces distance, and enfiladed some of the fronts of the fortress.

There were thus 16 batteries, with 85 guns, in action.

Major von Eynatten commanded the artillery, Colonel Riedel the engineers. The latter had originally been ordered to Verdun, but that fortress capitulated on the very day of his arrival.

Up to the day last mentioned, only the ridges had been occupied round the fortress, which lies with its small towers deep in the valley of the Moselle. On the night of the 21st–22nd November, however, the villages and farms lying in front were taken—namely, the farm of Gassion, Terville with the adjoining mill of St. Marie, Haute and Basse Guentrangle, La Grange, and Malgrange, St. François and St. Anna. At the same time, in very



bad weather, a pioneer company connected the churchyard at Terville with the village, by a trench with a salient angle, in order that those in the fortress might, by seeing the earthworks, be convinced of the gravity of the situation.

The guarding of the low ground by the Moselle was undertaken, on the left bank, by two squadrons of the 2nd reserve cavalry regiment; on the right by some squadrons of the 15th regiment of hussars.

On the 22nd November, at 7 o'clock in the morning, the bombardment began in thick rainy weather, rendering it difficult to take aim. After a short time the artillery of the fortress also opened fire. The prefecture, the arsenal, three wings of a large barrack, the large riding-school, and the town-hall became, one after another, a prey to the flames. The conflagrations lasted throughout the night. As the Moselle happened to be very high, some of the streets and the cellars were under water, and it was impossible for the citizens to take refuge in the latter. Regardless of the destructive fire of the siege-guns, the defence of the place was maintained with energy, for the first 24 hours, by the artillery of the garrison; and for this the commandant of the place, Colonel Turnier, is deserving of credit. Longer than this the defenders could not contend against the increasing severity of the bombardment, as the garrison had to be employed almost solely in extinguishing the fires in the town. The rate of fire of the siege-batteries was ordered to be reduced to one round every half-hour by day, and one round every hour by night.

On the night of the 22nd-23rd November, the artillery of the garrison set fire to the village of Beauregard, the great establishment of Jesuits, and the rendezvous of the franc-tireurs at the time of the investment, and thus prevented its occupation by the Prussian troops, which was to have taken place that very night.

On the 23rd November, at 2 P.M., the tricolour was replaced by the white flag on the church-tower. The besiegers looked upon this as a sign that a capitulation was desired. On the side of the attack, therefore, fire ceased. As no flag of truce came from the fortress, Lieutenant-General von Kamecke sent one of his adjutants into the place. He returned, however, with a request from the place that the women and children might be allowed to leave the fortress. Under the circumstances this request could not be entertained, and the bombardment was therefore resumed at half-past 7 in the evening, and lasted till 10 o'clock in the morning of the 24th November. About 2 o'clock in the afternoon, after bombardment for 52 hours, the fortress capitulated, on the terms agreed upon at Sedan. On the Prussian side the capitulation was concluded by Major the Baron von Hilgers, of the general staff.

On the 25th November, at 11 o'clock in the forenoon, the place was given up. First the gates, powder-magazines, and mines were taken possession of, and then the French garrison marched out, and laid down their arms in front of the gate of Saarlouis. Thence the garrison were sent off, in three detachments, to the South-German fortresses, as prisoners of war.

The loss in men on both sides was small. The Prussians lost only two killed and eight wounded, the French apparently only a few killed and 40 wounded, whilst of the civil population no one was seriously hurt. The losses entailed on the latter by the bombardment were, however, very heavy, and were estimated at 3,000,000 francs (£120,000).

Besides the 4,000 prisoners, including some national guards, 200 guns, with great quantities of other warlike stores, were taken. It should be mentioned that the occupation of Thionville led to the discovery of unquestionable evidence of the violation of neutrality by the Grand Duchy of Luxembourg.

In conclusion, we may add, as a historical note, that Thionville was captured by surprise by France in 1558, just as were Metz and Strasburg. Subsequently it was given up to the Spaniards, and came first definitely under French rule in 1659.

With this siege, however, Thionville has once more become Diedenhofen.

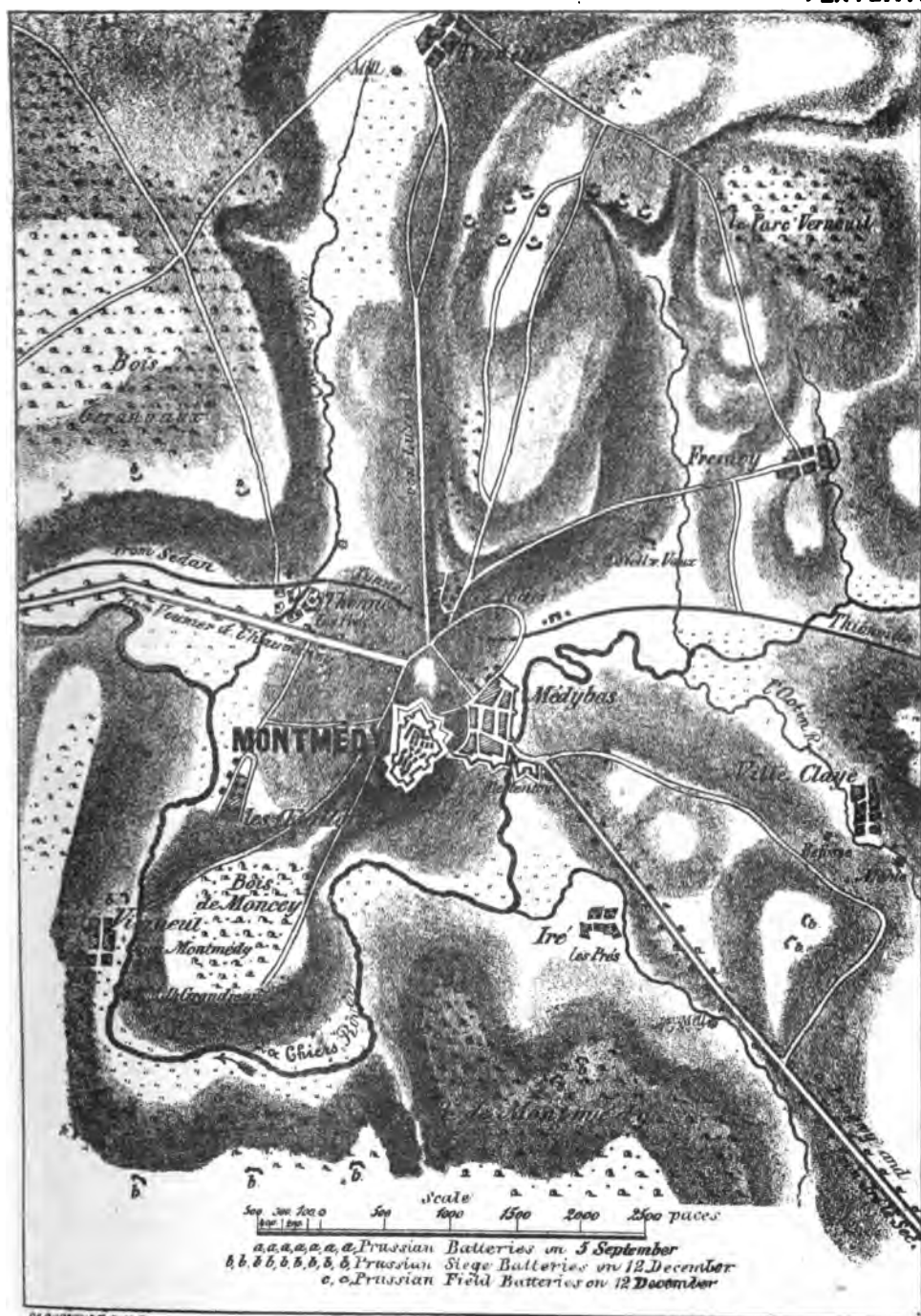
## MONTMEDY.

(PLATE XV.)

THE fortress is situated on a conical hill, sloping away from it on three sides. To the north the hill is joined on to a ridge of very great importance defensively, which, at the village of Thonelle, attains its greatest breadth and height above the bottom of the valley of the Chiers. That river here receives several mountain streams. Round the fortress the ground is of more or less military importance, generally covered with wood, and there are also hills difficult of access, which slope down steeply to small water-courses. Between this ridge and the hill on which the fortress is situated the ground falls rapidly, and at the point of greatest depression the roads from Paris to Luxembourg and from Sedan to Metz cross. The railway, Sedan-Thionville-Metz, passes under this depression of the ground, through a tunnel about 1,200 paces 987½ yards) long. Although the fortress was constructed as far back as the middle of the sixteenth century, it was developed into its present form, and very much strengthened, in the time of Louis XIV., under the direction of Marshal Vauban. The defences then existing consisted principally of a high scarp-wall with many projections, and provided with machicoulis and other defensive arrangements of that description; and partly around this wall was added the existing enceinte, with eight irregular bastions and six ravelins, in precise conformity with the edge of the plateau, and not in accordance with any definite system of fortification. The great height of the profile and the situation of the fortress, on a rocky hill, 200 feet high, impracticable for troops, give the place its strength, and render it secure from any sudden attack in force. There are no detached works.

The town of Montmedy, with 2,500 inhabitants, is divided into the lower town, which lies in the valley; and the upper town, which is enclosed by the mountain fortress. In the latter there are five barracks for 800 men, two powder-magazines, and the arsenal. The lower town, also called Médybas, is surrounded by a crenellated wall, which, being uncovered on almost all sides, can be easily breached. The hospital, and a cavalry barrack for 100 men, with stabling for 100 horses, are here situated.

By the 3rd September, after the battle of Sedan, the head of a column of the Royal Prussian guard corps, under the command of Captain Zimmerman, of the 3rd ulan regiment of the guard, had arrived in the immediate neighbourhood of the fortress. That





officer caused the commandant to be summoned to surrender, by Lieutenant von Jagow, but the demand was refused. In riding thither the trumpeter with the flag of truce was shot. This was immediately reported to the Commander-in-Chief of the army of the Meuse, under whose orders the guard corps was. The commander-in-Chief, in consequence, ordered the guard corps, with a brigade of infantry and the necessary cavalry and artillery, to make an attempt to capture the fortress. The two heights, on the north and north-east of the place, afforded suitable positions for the artillery, as they lay nearly as high as the fortress; but for field-guns, which were almost the only ones available, the distances were too great for obtaining thoroughly satisfactory results. The bombardment was to take place chiefly from the north, from seven batteries of the brigade of artillery of the guard. These were placed as far as possible behind natural cover, and swept both the town and the fortress in the direction of their greatest length.

On the 5th September, at 10 A.M., the batteries opened fire on the fortress. Soon the sub-prefecture and the adjoining part of the town were in flames. About 11 o'clock the mayor of Thonelle was sent by the officer commanding the artillery brigade of the guard, Prince Kraft zu Hohenlohe-Ingelfingen, to the commandant, Colonel Reboul, to demand a surrender of the fortress within an hour and a half. The reply given to the mayor was the same as that made to the bearer of the flag of truce on the previous day. Upon this the artillery fight began afresh on both sides. After some hours it was broken off on the side of the Prussians. The Prussians lost four men and one horse. As by these proceedings satisfaction had been obtained for the breach of international law in shooting the trumpeter with the flag of truce, and as, moreover, it was manifest that the fortress could not be taken without more preparation of a special character, the Prussians resumed their march on Paris. The French had three killed and 15 wounded.

At this period it was not intended to take the trouble to watch and invest the fortress, which lay off the line of march and of the operations of the German armies. Under these circumstances, the commandant was able to send away part of the garrison to the French army of the North, and to carry on the duties of the fortress with almost national guards alone. Supported by, and in communication with, the people of the country, the commandant did not fail to prove troublesome to the Prussian lines of communication that lay nearest to him. In consequence, many encounters took place with the 2nd and 4th companies of the 65th regiment, which were detached from the investing corps before Verdun to protect the post at Stenay, between the former place and Sedan. After their departure, on the 7th October, the commandant of the fortress made a sudden attack on Stenay. For this purpose about 600 men of the garrison of Montmedy were sent out on the night of the 15th-16th of October, and about 6 o'clock in the morning they arrived at Stenay, only  $1\frac{1}{2}$  miles ( $8\frac{1}{2}$  English

miles) distant from the fortress. Here a street-fight commenced. Although the garrison in Stenay was turned out very quickly, yet the French succeeded, with the assistance of some confederates in the place, in carrying off to Montmedy the staff-officer of the post, with his adjutant, two artillery officers who happened to be in Stenay, an officer of the intendant with 100 men of the Brühl landwehr battalion, 40 of the Borken landwehr battalion, and 40 sick, and in addition a Prussian military chest, containing 10,000 francs (£400).

It was not till after the capitulation of Metz, and almost at the same time with the close blockade of Thionville, that Montmedy was invested by the 27th brigade, under the command of Colonel von Pannowitz, and further by the 74th (1st Hanoverian) regiment, the 39th (Lower Rhenish) fusiliers, the 7th Westphalian jäger battalion, and some cavalry and artillery.

In occupying the positions round Montmedy on the 16th November, the 1st and 2nd battalions of the 74th regiment became engaged at Chauveney and Thonelle with the French infantry, who were driven back into the fortress, leaving behind 86 unwounded prisoners.

The siege-park told off for the bombardment of Montmedy was almost the same in the calibre of guns, and also as regards the troops employed and the commanding officers, as was engaged at Thionville. From that place they were sent as far as Longuyon by rail, and thence by march along the road to Montmedy. The parks were in several places. The chief park was at Juvigny sur Loison, with supplementary parks at Bazailles and Chauveney, to the south and west of Montmedy respectively.

On the 28th November Lieutenant-General von Kamecke arrived, with the rest of the 14th division, exclusive of a portion detached from before Montmedy, to observe the fortress of Longwy. Headquarters were in Louppi. Meanwhile the technical preparations for the bombardment were commenced.

On the 11th December the parks were complete. In the meantime the pioneers (engineers) constructed roads and huts for the pickets, and were employed on railway and telegraph works.

On the 9th, 10th, and 11th December the batteries were constructed under very difficult circumstances, the enemy endeavouring to interrupt the work by the fire of artillery and of chassepots. At 11 o'clock in the evening the infantry took possession of the villages of Thonne-les-Près, Frenoy, Ville Claye, and Irè-le-Près. In the night of the 11th-12th December the arming of the batteries was taken in hand, a task that was very difficult, owing to the badness of the roads and the hard-frozen snow. The batteries, except the rifled mortar-battery, were situated at distances of 2,000 to 3,800 paces from the fortress, on the heights at Ville Claye and Gerauvau. The mortar-battery, however, was in the valley close behind the village of Vigneul and the Bois de Moncey. The siege-pieces employed were :—

8 long rifled 24-pounders,  
 10 short rifled 24-pounders,  
 4 rifled mortars,  
 20 rifled 12-pounders.

—  
 Total...42 siege-pieces.

In addition there were twenty 6-pounder field-guns, and with these pieces a heavy field-battery of the 7th regiment of artillery, and another of the 4th regiment of artillery, were posted on the heights to the north of the fortress.

On the 12th December, at half-past 7 in the morning, the weather being clear, fire was commenced from all the batteries, which had been armed altogether with 60 pieces. The west front of the fortress was the chief object of the fire. Orders were given that by day each gun should expend five rounds, and each mortar three rounds in an hour, and by night each gun and each mortar one round. The special object ordered to be aimed at by the batteries of the attack were the west front above mentioned, certain flanking casemates, the powder-magazine, the hollow traverses, the gate of the fortress leading to the town, and the fortress itself. After a short time the garrison replied very briskly, and although several guns were silenced on the front of attack, the enemy kept up a well-directed fire till the evening, but then the fire entirely ceased. The battery armed with five short rifled 24-pounders, on the height and in front of the wood of Gerauvaux, was the most heavily cannonaded. Good results were not to be expected from the siege artillery, for towards noon heavy rain came on, which lasted throughout the day and night.

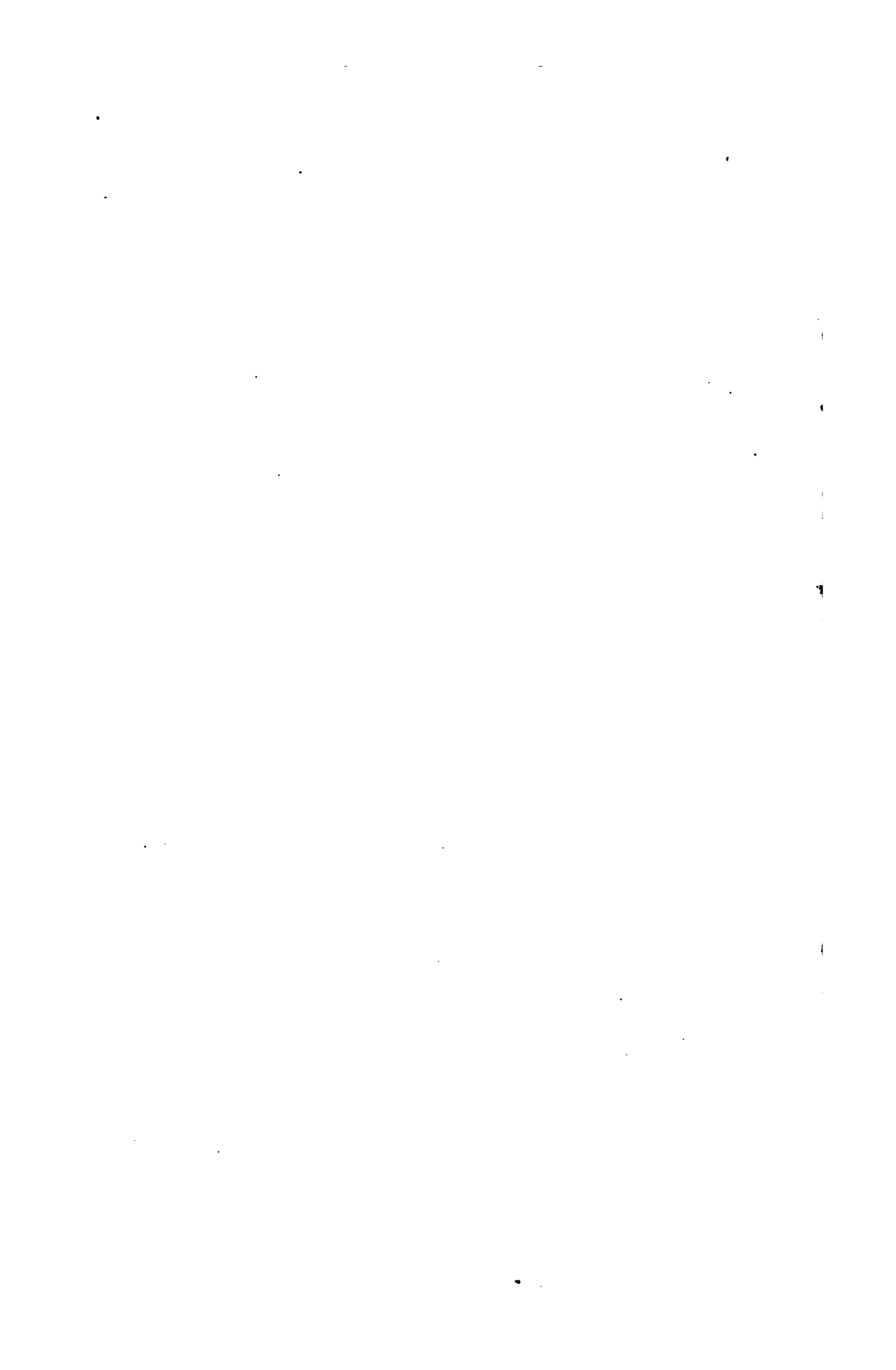
On the 13th December fire was continued, at a slow rate, only one round each hour being fired, because a thick fog prevailed, and made it impossible to see the object aimed at. The effect could not be ascertained, except that towards evening the town was on fire. The practice of the artillery had produced a frightful effect on the buildings of the place and on the fortifications. Among the latter, some iron splinter-proofs, apparently constructed of railway metals, and built up with masonry, were entirely destroyed. Hardly a house remained uninjured, and the public buildings were for the most part destroyed. About 8 o'clock in the evening the order was given to cease fire, as negotiations were entered into for a surrender. The commandant, having previously refused to capitulate, now, after 36 hours' bombardment, said that he wished to surrender. He sent for this purpose the second in command to Iré-le-Sec, whither also went Major the Baron von Hilgers, of the Prussian general staff. At 2 o'clock in the morning the terms of capitulation were concluded, and their ratification took place by 8 o'clock.

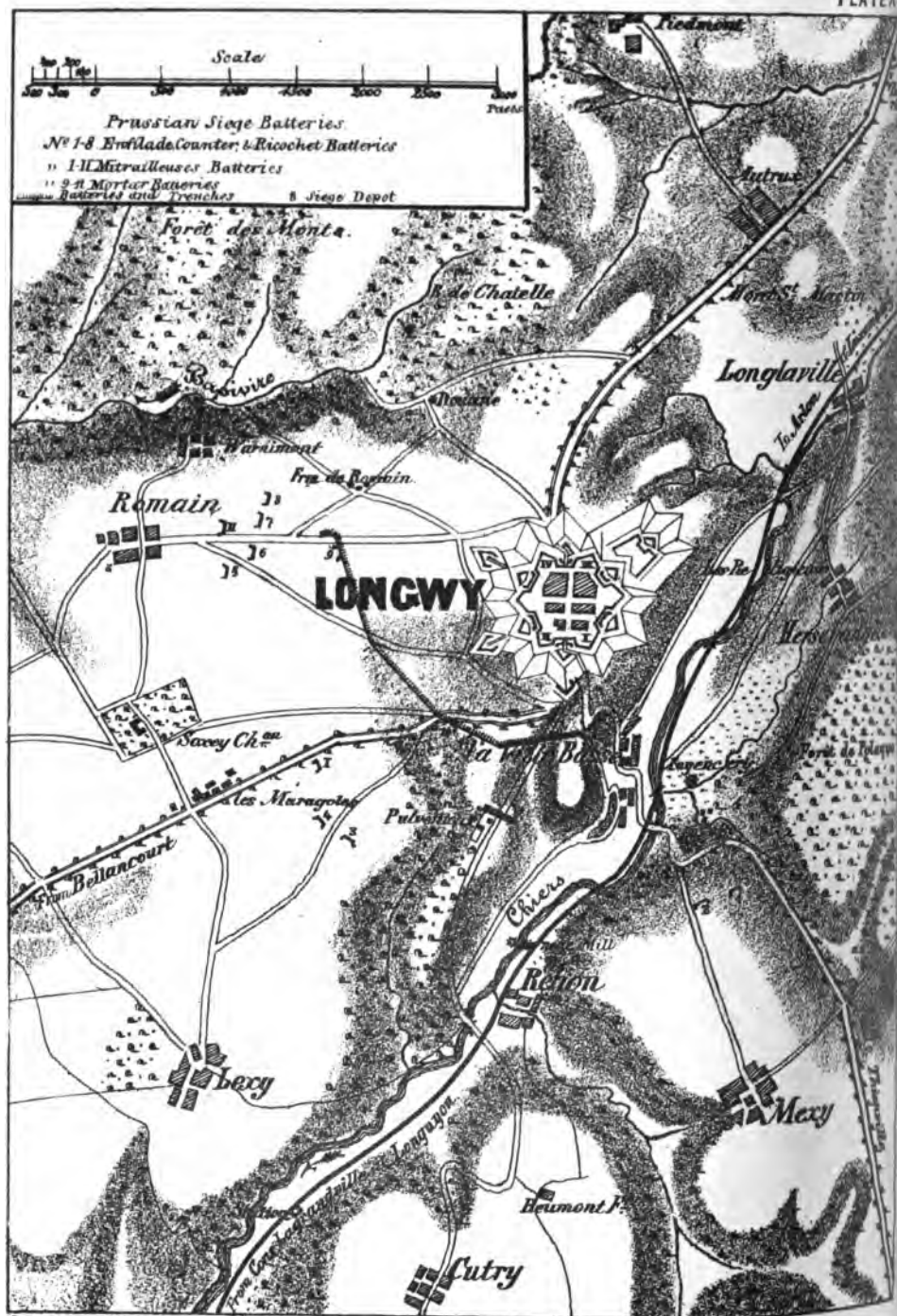
On the 14th December, at 2 o'clock in the afternoon, the fortress was given up, and the Prussian troops marched in. From the 60 pieces in action, about 3,000 rounds had been fired altogether. The effect produced by the rifled guns, and chiefly by the rifled mortars, had hastened the capitulation, and had caused



such devastation, that a longer resistance of the enemy's artillery by the fortress was impossible. The loss of the besiegers amounted to 12 wounded; that of the French to some 30 or 40 killed, and 50 wounded.

With the taking of Montmedy, there fell into the hands of the victors 3,000 prisoners, 65 guns, of which 21 were rifled, and several well-filled magazines; besides which 4 Prussian officers with 237 men were liberated from captivity. General von Kamecke had made the commandant answerable with his head for the lives and health of the prisoners, after he had previously refused curtly to exchange them. The French had blown up the railway tunnel. By the fall of Montmedy the railway line from Thionville to Sedan was opened for the German armies before Paris, and operating in the North-west of France, and, moreover, a stop was put to the movements of the franc-tireurs, who had their headquarters in the fortress.





## LONGWY.

(PLATE XVI.)

THIS fortress is the point of junction of the roads from Thionville and Metz, from the Belgian fortress of Arlon and from Luxemburg, and from Verdun and Paris. It also bars the junction line connecting the railway from Thionville to Mézières with that from Luxemburg to Arlon.

The occupation of the place only became desirable after Thionville, Sedan, Montmedy, and Mézières had been taken, as it appeared necessary then to establish communication between Northern Lorraine and the neighbouring country, and to put an end to the movements of the franc-tireurs in that region, which were much facilitated by the fortress. The siege of Longwy was to be regarded as the final operation against the north-east line of French fortresses, excepting Givet and Charlemont.

Longwy contains about 3,500 inhabitants, and is situated on the right bank of the Chiers. It is divided into an upper and a lower town, the latter being in the valley; the former on the plateau in the fortress. The work was built by Marshal Vauban in 1680, as a fortified place opposite Luxemburg.

The Chiers receives close to the fortress several mountain streams, which enclose on the east and south of the place a tract of wooded broken ground with deep valleys. Through the plateau of Mexy on the south-east passes the road to Thionville, which, with several windings, descends the slope of the hill and goes through the lower town into the fortress. The slopes of the hill there are very steep, and off the road are scarcely practicable, and thus form a serious obstacle to the approach of the fortress, added to which the defiles on the roads are generally effectively commanded by the guns of the fortress. The road to Verdun passes over a plateau broken by numerous undulations, and the village of Cosnes may be considered its central point. Here, as well as on the plateau of Mexy, are many favourable positions for artillery, while the ground is such as to permit of approaches by sap only in the immediate neighbourhood of the fortress, within a distance from the foot of the glacis of about 600 to 800 paces.

The fortress of Longwy is a bastioned hexagon, with a circumference of 2,340 metres (2,563 yards), and is provided with well-revetted dry ditches. The enceinte is in its essentials laid out according to Vauban's first system, and provided with the outworks, ravelins, and caponiers belonging to that system. On the front,

towards the plateau of Cosnes, the front of attack, three lunettes on a lower level are thrown out at the foot of the glacis. A large hornwork covers the north-east front of the fortress, and covers the defile of the road there, and the extensive trough-shaped valley of the Chiers.

Longwy, being close to the Belgian and Luxemburg frontiers, and remote from the scene of the greater operations of the war, had but a secondary influence on the course of those operations; and hence only small detachments passing by came into its neighbourhood before the investment and bombardment. Nevertheless, their appearance, and the expectation of a bombardment, induced the commandant, Colonel Massaroly, to issue proclamations to the inhabitants, who were required to assist in the defence of the place or to leave it. In consequence of this, many of them crossed over to the neutral country of Belgium.

While the Prussians were employed in the sieges of Montmédy and Mézières, they confined themselves to observing the place with small detachments, and occasionally operating against the *franc-tireurs*. These were in constant communication with the fortress, and kept the commandant informed of all the military movements that took place in the country round. Acting on news thus received, he endeavoured, with two battalions, on the night of the 26th to 27th December to carry off the Prussian detachment at Teflancourt, on the road to Verdun, and at Frenois la Montagne to the south of it. The enterprise was much facilitated by the favourable formation of the ground, and moreover the Prussians were actually surprised; but, nevertheless, the attempt failed entirely, and the French were quickly obliged to fall back on the fortress, taking with them a Prussian officer and two men.

The investment of the fortress was rendered very difficult by the immediate neighbourhood of the frontier, especially on the north-west, where it is only half a mile ( $2\frac{1}{2}$  English miles) distant. The government of Belgium arranged that the frontier there should be closely occupied. The investing detachment, consisting of infantry and cavalry of the *landwehr*, and barely sufficient as regarded its strength and composition for the purpose, was at first under the command of Major the Count von Schmettau; but, by degrees, the whole of the troops told off for the siege arrived, under the command of Colonel von Cosel, for the observation of the fortress, and then Colonel von Krensky, chief of the general staff of the XIIIth army corps, took the chief command. He fixed his head-quarters at first in Longuyon, and subsequently in Cons la Grandeville.

The siege corps had a total strength of—

- 11 battalions of infantry, namely, the *landwehr* battalions of Köslin, Glatz, Münster, Oppeln, Neutomysl, Schrimm, Ostrowo, Rawicz, Anclam, and Schievelbein;
- 2 squadrons of cavalry;
- 2 reserve field-batteries of the 11th Hessian regiment of artillery;

7½ companies of the garrison artillery of the guard and of the 4th, 7th, and 8th regiments of garrison artillery; 4½ companies of garrison pioneers (engineers) of the 1st, IIrd, IIIrd, and IXth army corps.

Major Wolf acted as commander of the siege artillery, and the direction of the engineering works was entrusted to Colonel Schott, of the engineer staff.

The energetic commandant of the fortress, Colonel Massaroly, a Corsican by birth, impeded the advance of the siege corps to its position before the fortress as much as he could. Many engagements of reconnoitring parties and of the outposts accordingly took place, and the positions taken up had generally to be secured by field fortifications, barricades, and similar means against further attacks of the French. Thus encounters took place at Herserange, only half a mile (2½ English miles) from Longwy, in a wooded, deep, broken country on the side of the valley of the Chiers, and at the railway station on the south of the fortress, as well as at other places, generally with the object of impeding the works and dispositions of the Prussians.

By this activity the vigilant garrison obviously put many difficulties in the way of the execution of the necessary technical reconnaissances by the artillery and engineers, and delayed those operations, which were, moreover, not particularly easy to perform on account of the broken character of the ground. Nevertheless, they had to be undertaken in order to decide upon the front of attack. The decision, on this point, was to attack the fronts V. and VI., and eventually to force a way into bastion VI., which was conveniently situated for the final operations of the attack. This choice was made having regard not merely to the fortifications, but also to the advantages above mentioned of the ground in that quarter, and especially to the fact that the right wing of the works of attack would thus rest in security on the steep slopes of the valley of the Chiers.

The transport of the siege park for the artillery, and of the materials and intrenching tools for the construction of the batteries and trenches, and of the special equipment necessary for the attack, was troublesome and tedious, owing to the situation of Longwy off the main road. It was necessary first of all to reconstruct the railway from Longuyon to Cons la Grandeville, a mile (4½ English miles) to the south of the fortress, where it was intended to establish the principal siege park. This was done satisfactorily and quickly by the pioneers (engineers). The arrangement mentioned was the most advantageous for the park, on account of the broken ground there in front of the fortress, but the arming of the batteries with the guns and the conveyance of the ammunition to them were matters of extraordinary difficulty. Bad, steep roads, the ground made slippery by frost, and a fall of snow, all contributed to this difficulty. For the execution of the works of the engineers there were two depôts of tools established, one at Villers la Montagne, and one behind Villers la Chèvre.

The siege park was comprised of

17 24-pounders	} Prussian ordnance ;
33 12-pounders	
4 27-centimetre mortars	} French ordnance
14 22-centimetre mortars	
12 15-centimetre mortars	
6 mitrailleurs ;	

Total 86 pieces of ordnance besides field guns.

The artillery was brought from the stores of several fortresses, among others from Thionville, Metz, and Montmedy. At the same time, a part of the materials for the batteries was supplied from those places, whilst the remainder had to be prepared in the well-wooded country round, and brought up thence with great difficulty.

The batteries were commenced without waiting for the arrival of the last guns, which were delayed on account of the small use that could be made of the railway. Besides which there could be no doubt that under the existing circumstances the batteries would be but slowly built, both on account of the difficult character of the soil, and of the activity displayed by the enemy. In no case would it be possible to build the batteries in a single night, as was done elsewhere. Before the batteries could be commenced, other technical works had to be executed. Among these the most important were, the making of a road over the Mont des Chats, and the laying of lines of telegraph from Longuyon to the head-quarters and to Villers la Montagne. It was considered necessary also to destroy the railway to Luxembourg, by tearing up the rails and blowing up a bridge.

By the 16th January, it became practicable to proceed with the batteries, and their construction was completed in three nights, except some that were finished subsequently. A peculiar mode of construction was adopted to obtain more cover and to reduce the chance of discovery, and this consisted in making the parapets at the flanks with gentle slopes which could scarcely be noticed at a distance. The batteries were constructed, in the following order :—

Battery No. 1. Enfilading and dismounting battery, 3 24-pounders, against fronts VI., V., IV.

Battery No. 2. Enfilading and dismounting battery, 3 24-pounders, against fronts V., IV., III.

Battery No. 3. Dismounting and ricochet battery, 4 24-pounders, against bastion V.

Battery No. 4. Dismounting and ricochet battery, 4 12-pounders, against ravelins VI., V.

Battery No. 5. Dismounting and ricochet battery, 4 12-pounders, against bastion VI.

Battery No. 6. Dismounting battery, 4 12-pounders, against bastion IV.

Battery No. 7. Dismounting and ricochet battery, 4 12-pounders, against bastions V. and VI.

Battery No. 8. Dismounting and ricochet battery, 4 24-pounders, against ravelins V. and VI.

Emplacement No. 1. 2 mitrailleurs	{	against any sorties that
Emplacement No. 2. 2 mitrailleurs		might be attempted by the garrison.

The batteries were situated at a distance of about 2,000 to 2,400 paces, and from their general arrangement it appears that the design of the attack was to exhaust thoroughly the fronts selected before the final operations of the siege, and also in the first instance to disable as far as possible the artillery defence of the collateral works.

In order to keep the garrison in ignorance as long as possible of what was done by the attack, and also to push on as far as possible the construction of the batteries undisturbed by the enemy, which was very difficult, the fortress was shelled from several points on the ground around it. For this purpose the field batteries present with the siege corps on the 16th to 19th January took up positions well covered by the ground opposite the fortress and threw rapidly several rounds of shell into it, with a view of retiring again as quickly as they had come up. This bombardment with field guns was not without effect. The shells burst here and there in the town, spread alarm and dismay among the inhabitants, and kept the garrison under arms till they were weary. No important fires were caused, but the roof of the prison and the church towers were pierced by shell. To obtain a secure footing as near as possible to the fortress, on the following night the farm Pulventeux, about 1,000 paces to the south of the place, was prepared for defence; rifle-trenches were pushed up to the slope there, and were also constructed on some heights of the same kind on both sides of the road leading to Verdun. On the evening of the 18th January the china factory on the west of the lower town and the railway station were occupied by the besiegers.

On the 19th January, about 8 o'clock in the morning, battery No. 1 opened fire with siege guns; the artillery of the garrison, as soon as they became aware of the state of affairs, set to work to increase the armaments of their works, and answered the fire with composure. They directed their attention chiefly to battery No. 1, dismounted several guns, and wounded and killed some men.

On the 20th January, with the assistance of battery No. 2, the artillery of the defenders was towards evening reduced to silence, and the works demolished to such an extent that the enemy could not renew his fire during the night. A heavy fog prevented the contest of the artillery from being fully developed, and caused a long pause on both sides in the delivery of the fire. On the night of the 19th to 20th of January, the bridge over the river situated in the lower town was blown up to prevent its being used by the enemy for sorties. Also on the left wing of the attack, which contained by far the greater number of batteries, a contest of artillery had taken place with like vigour on both sides. The besiegers had carried out the plan of attack with precision, and had quickly produced a great effect on the front assailed. They



did not delay to improve the advantage gained by the construction of a parallel by the "common sap."\* This was accordingly done on the night of the 21st to 22nd January, at a distance of 1,000 paces from the fortress, and nearly as far in front of the batteries. The heavy frost, however, impeded this work, so that it was not possible on the first night to complete it to the prescribed profile of 4½ feet wide at the top and 3 feet at the bottom, with a depth of 4 feet. It was necessary to make renewed and continued exertions on the following day, and on the night of the 22nd to 23rd January, in order to execute and complete the parallel so as to be at all fit for its purpose, and to obtain a sufficiently strong parapet.

On the 22nd January, at 8 A.M., the artillery fight was renewed, the garrison and their artillery having remained quiet all the night, and having done nothing to interrupt the construction of the parallel. Batteries No. 7 and No. 8 opened fire. The results produced by the Prussian artillery were on the whole satisfactory. It should, however, be mentioned that the enemy fired for the most part only against battery No. 2, and towards the afternoon their defence became slack. In the evening battery No. 9 was completed in the parallel opposite bastion V., and at once armed with four 22-centimetre (8·66-inch) mortars, in order to fire upon the enemy's workmen and other troops there. During the execution of these batteries the garrison made a sortie and brought on a musketry fight with the Prussian outposts, and thus interrupted the progress of the work for several hours.

*January 23.*—Continuance of the fire on both sides. There remained no doubt but that batteries Nos. 1 and 2 annoyed the enemy excessively, for to-day again he was much occupied with them, and opened fire upon them with some pieces of artillery newly brought into position, particularly from some heavy mortars. Otherwise he kept pretty quiet; for the duty on the ramparts, which were terribly injured by shell, began to be difficult. The construction of mortar battery No. 10 for four 22-centimetre (8·66-inch) mortars, and of mortar battery No. 11 for four 27-centimetre (10·64-inch) mortars, was commenced, and it was intended on the ensuing night to make emplacements Nos. I. and II. for mitrailleurs on the flanks of the parallel, so as to have these pieces near at hand in case of sorties against the trenches. At 8 o'clock in the evening fire broke out in the fortress. Although the flames were made the object of the fire of several batteries of the attack, yet the garrison managed to put them out during the night.

*January 24.*—In the previous night battery No. 9 was made ready to fire, and about 8 A.M. the bombardment of the fortress was renewed as usual. The enemy replied with far less vigour than before. Fire again broke out in the fortress, and became at last so extensive that it could not be put out. The two mortar batteries Nos. 9 and 10, begun the day before, were made ready to fire. Their construction was excessively difficult, for they had to be made

\* See Note, p. 46.

in hard, frozen ground covered with wood and intersected by roots.

As the attacked bastion, No. VI., was to be surrounded by the parallel, the trench had to be extended on the following night, and so laid out that its right flank should pass round the bastion, and should be only 600 paces from it.

The preparations for carrying on this work by night were in hand, when a flag of truce from the fortress appeared at the outposts, to enter into negotiations for its surrender. These were concluded in the early hours of the morning of the 25th January. 200 garrison guns, of which many were much damaged, a quantity of other military stores, and nearly 4,000 prisoners fell into the hands of the besiegers. Among the guns captured were several rifled 24-pounders of the newest construction and of great range, which had been supplied to the armament of Longwy in consequence of the Luxemburg affair in 1867, by special orders of Marshal Niel, then War Minister.

In connection with this siege, it may be mentioned that in 1792 Longwy was surrendered to the Prussians, but was soon evacuated again. In 1814 it was not invested, but in 1815 it was blockaded by Prussian troops under the Prince of Hesse-Homburg. They were then forced, by repeated attacks from Thionville, to retreat, but returned with reinforcements, commenced a regular siege, and after completing the second parallel on the 18th September, compelled the fortress to capitulate.

## MEZIÈRES.

(PLATE XVII).

MEZIÈRES is one of the most important places in the north-east of France, and the point of junction of four railways, those coming from Givet and Charlemont, Hirson and Laon, Rethel and Rheims, and from Sedan and Metz, and also the place where all the communications by water and by land in that district meet.

The town of Mézières, containing 5,600 inhabitants, and with spacious barracks, lies on the right bank of the Meuse, which after making a long détour, returns and washes the place on the north side. On the north and south respectively are the suburbs, d'Arches and de Pierre. The fortress proper, which surrounds the town, forms a long quadrangle, about 1,000 paces (823 yards) long and 350 paces broad, of which the north and south sides, being protected by the Meuse, consist merely of an escarp wall, flanked by round bastions, towers, and similar large projections. The works of the town on the shorter sides form a very complicated system of fortifications, with a number of greater and lesser lines of defence, which are only of interest for the engineer, and probably cannot be considered of any value for a siege in the present day.

The west front is defended by two bastions, with orillons and with broken curtains. It is further strengthened by a ravelin and two counter-guards in front of the bastions, with a great hornwork between them. These counter-guards, as well as the hornwork, have large traverses, and are in part provided with block-houses. Outside this fortress lies the suburb of St. Julien. The citadel, with its high profiles, proof against assault, at the foot of the heights of Bertaucourt, protects the east front. It has four whole and two half bastions, and is strengthened towards the country, as well as to the south, by a double line of fortifications. On the ground in front of it, half way up the slope of the hill of Bertaucourt, which completely commands the fortress, a flèche has been thrust out with a communication covered on both sides. The small suburb d'Arches on the side of Charleville is enclosed by a hornwork, the larger one De Pierre by bastioned lines with ravelins. Both are provided with suitable ravelins, and are thus formidable bridgeheads for the massive bridges over the Meuse. The northern one of these has 26 arches. A quarter of an hour's walk from the suburb d'Arches lies Charleville, which is regularly built, and was formerly fortified. It contains barracks and military establishments belonging to Mézières, among which should be men-





tioned an important small arms factory. To the eastward, on the plateau on the right bank of the Meuse, a work had been recently constructed. In Mézières there is an engineer school, established a long time ago, from whence in its time have proceeded improvements in the French system of fortification. Many years ago it was of great reputation. The place was well provisioned, amply provided with guns and ammunition, and, as the most northern fortress on the Meuse, was by a decree of the Emperor put into a state of siege at the first outbreak of the war. The open town of Charleville was partly barricaded, and on the north was protected by several small field works.

The course of the events of the war brought Mézières unexpectedly into immediate contact with the enemy, as it lay in the line of operations of the army of Marshal MacMahon, which, at the end of August, in attempting to relieve Metz, found itself, by the extension of the German armies, forced into the small space between the line Sedan-Mézières and the Belgian frontier. In consequence, Mézières served as the point d'appui of the right wing of the French position. When the army of MacMahon advanced, a part of that force was sent from Châlons to Sedan by the Rheims-Mézières railway, while Vinoy's corps followed in reserve, and hardly complete in its organisation, being formed of gardes mobiles and dépôt battalions, only reached Mézières on the 31st August. Here General Vinoy found his communication with MacMahon already broken, and he consequently, with the consent of the war minister, began to retreat on Paris. During the battle of Sedan, the Royal Württemberg division was charged to take up a position at Bertaucourt, opposite Mézières, and to observe the place. Accordingly, at break of day on the 1st September, a pontoon bridge was thrown over at Nouvion, and was crossed by part of the division, in order that they might at the same time take up a position in readiness for the battle in the neighbourhood of Donchery, while the 1st jäger battalion remained on the bridge and furnished patrols opposite Mézières. In the afternoon the French came out of Mézières towards Nouvion with two battalions, two squadrons, and four or six guns, and were subsequently driven back through Ayvelles into the fortress, after a short engagement of musketry and artillery by the 8th regiment, a squadron of dragoons, and the 7th field battery, who had fallen back from the main body of the division to the position of the bridge. Two companies of jägers, and a squadron, co-operated with these movements on the right bank of the Meuse. The detachment bivouacked on the night of the 1st to 2nd September, at Ayvelles.

On the 2nd September two squadrons of the 6th Prussian cuirassiers, under the command of Captain the Count Monts, were sent forward to reconnoitre opposite Mézières, and that officer on this occasion treated with the commandant. Count Monts, and also on the following day First Lieutenant the Baron von Reitzenstein, were fired at in returning from the fortress.

After the battle of Sedan there was a kind of armistice for Mézières, whilst the fortress, at the instance of the Commander-

in-Chief of the French, General Count von Wimpffen, supplied provisions from its stores for the French prisoners, and permission had to be given for these provisions to be forwarded by the railway to the neighbourhood of Donchery. Subsequently, railway trains with wounded, who were sent through Belgium, were allowed to pass unimpeded through the rayon of the fortress, and for this reason, apparently in recompense, the Germans abstained for the time from further hostile measures against the place.

The country round Mézières is cut up by hills, valleys, and woods, and is much built over, and, being conveniently near the French frontier, was frequently the scene of the operations of bands of franc-tireurs, supported directly, or indirectly, by the fortress. They fired at railway trains carrying the wounded, and at the end of October they surprised a Prussian provision train, and also a patrol of thirty cuirassiers reconnoitring at Olicy, of whom they seem to have killed the greater number. These circumstances made it difficult to operate against the fortress, as was now necessary. On the advance of the 1st army from Metz to the west of France, the 1st infantry division was sent forward, at the beginning of November, towards Mézières to cover the right flank, and towards the end of that month it was relieved by the force under General Schuler von Senden (the line brigade of the division previously commanded by General von Kummer. A strict blockade of the fortress was not then contemplated, but detachments of the force mentioned had frequent encounters with the franc-tireurs. A band of the latter was surrounded in the neighbourhood of Fagnon, a mile ( $4\frac{1}{2}$  English miles) south-west of Mézières. The commandant of the fortress, Colonel Vernet, caused a sortie to be made against them on the 14th November, but these troops were driven back into the place. Another band of franc-tireurs had been driven back in a north-westerly direction from the fortress towards Rocroy, and had made choice of the village of Harcy for their abode. The Prussians reached them there, and dispersed them.

Subsequently the force above mentioned marched away to the westward. After the capture of Montmedy, the bombardment of Mézières followed in due course. Part of the 14th division took up a position against it, and in doing so engaged the franc-tireurs on the 22nd December at Nouzon, a mile ( $4\frac{1}{2}$  English miles) north of Mézières, and at Rigmogne. After completely investing the fortress, and having incessant small fights with the franc-tireurs roaming about on the north of it, the preparations for bombarding the place were commenced.

The siege corps was under the command of Lieutenant-General von Kamecke up to the 25th December on which day he was ordered away to take over the supreme direction of the engineer operations in the attack on Paris. He was accordingly replaced before Mézières by Major-General von Woyna II., commanding the 28th brigade of infantry. This officer completed the artillery arrangements for the attack, so far as to place the field batteries in covered emplacements on the north and west, so as to fire upon

Charleville according to the preconceived design. Head-quarters were in Boulzicourt, a mile ( $4\frac{1}{2}$  English miles) south of Mézières, on the right bank of the Meuse. The artillery consisted of 18 companies of garrison artillery of the East Prussian, Brandenburg, Lower Silesian, Rhenish, Hanoverian, and Hessian regiments of artillery, with a siege park composed of 26 long 24-pounders, 11 short 24-pounders, 32 12-pounders, 4 rifled 21-centimetre mortars, 7 heavy and 3 light French mortars, and 5 field batteries, of which three were heavy and two light. Besides these there were before the fortress 4 companies of garrison pioneers (engineers) of the 1st, II<sup>nd</sup>, IV<sup>th</sup>, and VII<sup>th</sup> army corps, the 2nd and 3rd companies of field pioneers (engineers) of the 7th Westphalian pioneer battalion, 2 pontoon columns of the 1st and VII<sup>th</sup> army corps, and the column of intrenching tools of the VII<sup>th</sup> army corps.

Colonel Meissner commanded the siege artillery, Colonel Riedel the engineers. The principal park of artillery and the laboratory were three quarters of a mile ( $3\frac{1}{2}$  English miles) south of the fortress at the Poudrie Impériale, between the railway and the high road to Boulzicourt. Two other small parks were established at Lumes, a mile ( $4\frac{1}{2}$  English miles) south-east of Mézières, on the right bank of the Meuse, and at Warnécourt, a mile and a quarter ( $5\frac{1}{2}$  English miles) south-west of the fortress on the road to Paris.

The peculiar situation of the fortress was unfavourable for the attack. It was surrounded by the Meuse on three sides, and thus gained considerable defensive strength, especially in time of floods, which at this late period of the year were to be expected. Close reconnaissances, however, led to the conclusion that the principal attack should be directed against the front of the fortifications of the bridgehead De Pierre, but that this should be supported simultaneously by batteries on the right bank of the Meuse, making partial use of the range of heights there. The siege batteries on this side, fourteen in number, and the five field batteries, were, in conformity with this plan, to counter-batter or destroy chiefly the fortifications of the bridgehead, and in rear of it the lines on its flank, the citadel, and the interior of the town of Mézières, and to enfilade the two bridges over the Meuse that were within range. The open town of Charleville lying behind would only be shelled in case it took an active part in the defence. It was intended up to this time to do no more than threaten it with artillery.

The construction of the batteries was carried out in the period from the 24th to the 30th December inclusive. The works were but little interfered with by the enemy, and were pushed on by day, partly by making use of existing cover. The hard frost that had penetrated the ground to a depth of  $1\frac{1}{2}$  feet was, however, a cause of delay. Repeated demands made to the commandant to surrender had not the smallest result.

On the 31st December at 8 A.M. the bombardment began, and the rule was laid down that by day five rounds should be fired



per gun per hour, and three rounds per mortar; while by night each gun was to fire one round, and each mortar one round every two hours.

On the Prussian side the battle of artillery was waged with great composure and with manifest results. The French artillery of the garrison replied with 18 to 24 guns, and endeavoured during the night to strengthen their ramparts, and to bring fresh guns into action.

On New Year's day, 1871, at 11 o'clock in the morning, the white flag was hung out, and a capitulation was concluded at 11 o'clock the same evening. The fortress was occupied by the Prussian troops at mid-day on the 2nd January. They took 98 officers and 2,000 men prisoners, and captured 106 guns, and many stores and provisions.

The bombardment, though it had only lasted twenty-seven hours, had however produced a terrible effect, as was shown chiefly by the ruins and the heaps of rubbish. To remain on the ramparts had become impossible, and in the town fire broke out after five rounds, and could not be completely extinguished. In the bombardment which the Prussians had directed against Mézières in 1815, when the fortress fell for the first time, and after some weeks the citadel also, the cathedral had remained uninjured; but on this occasion the altar was struck by a Prussian shell, and was completely destroyed.

Subsequently a rumour was spread that the commandant had been induced to surrender by the dread, on account of both the town and the fortress, of the explosion of the powder magazine. For the honour of the French commandant, we can give no credit to this statement.

With the capture of the fortress a second unbroken line of railway was gained, through Metz and Mézières to Paris, and the principal head-quarters of the operations of the franc-tireurs in the Ardennes was taken from them.



PLATE XVIII

*Plan*  
*of the*  
**SIEGE OF**





## PARIS.

(PLATE XVIII.)

with its 1,850,000 inhabitants, is the centre of the commerce, the manufactures, and the finance of France, and even these grounds is the capital of the country. Eight rail-roads, numerous high roads, water communication of every direction, form its means of intercourse with the other chief towns. The circumference of the city is six or seven leagues, and the total length of its streets a hundred miles (468 English miles).

The Seine, 200 to 300 paces broad, and spanned by 21 bridges, divides the town into two unequal parts. The fortifications consist of the enceinte, which comprises 98 bastions, generally very spacious, with revetted ditches 35 paces wide, but without bastions. In this rampart there are 47 gates, 14 sally-ports, 10 openings for railways, 4 for water-communications. The terre-plein, or military road passing along and within the line of the bastions, is paved; near and in some parts parallel to it runs the circular railway, which connects the railway stations with one another, and was of great use for the armament and defence of the fortress. Round this inner line of works, at a distance of 2,500 to 3,500 paces, runs the outer line, the circumference of which amounts to 15 leagues. It consists of a circle of 15 detached forts, whose distance apart is on the average 3,500 paces; they cover by their position a space about 18 leagues round. The north and north-east fronts are the strongest.

The north front commences with St. Denis, the key of the outer enceinte, around which are the forts De la Briche, Double Couronne, St. Nord, and De l'Est; these three works are connected by a wall and ditch, and are moreover specially strengthened by an inundation, controlled by sluices on the swift-running stream of Rouillon, and which again is covered by the redoubt of Stains. Railway and road embankments, lines of canals, many villages built solidly and easily adapted for defence, wooded heights, and the inundation above mentioned, which may be positively relied upon, give to this tract of ground great capabilities of defence. South of the railway leading to Soissons, and east of the canal of St. Denis, lies Fort d'Aubervilliers. The parts of the canal from St. Denis and Ourcq lying in rear of this fort are provided with parapets and small flanking earthworks.

South of the canal of Ourcq and the road to Metz, on the heights of Belleville and Pantin, lies the important fort of Romain-

ville, which is connected with the canal by lines en crémaillère along the slope of the hill. The crest of the plateau of Romainville is crowned by the three forts Noisy, Rosny, and Nogent, in the intervals between which the redoubts Noisy, Montreuil, Boissière, and Fontenay, are judiciously placed.

At this point terminates a section of the defences formed by the Marne, a river of the width of 100 paces, and this section is in addition protected at the south-east angle by a line of fortifications 2,800 paces long; the redoubts De la Gravelle and De la Faisanderie, placed on its flanks, impart to it considerable powers of resistance. The well-known fortified castle of Vincennes serves as a keep to this work, and is surrounded by a park of the same name; there is also here the great arsenal and the artillery practice ground, which extends to the Marne. Fort Charenton, in the angle formed by the Marne and the Seine, forms the southern termination of the defences of the north-east front.

The southern front of the outer line of defences commences on the left bank of the Seine, opposite Fort Charenton, with Fort Ivry, and thence is continued on a hilly, wooded plateau, intersected by ravines, by forts Bicêtre, Montrouge, Vanvres, and Issy, the last commanding the Seine; in front of the last three lie the heights of Bagneux, Clamart, Meudon, and Chatillon, which became of such importance during the siege. The forts command the railways to Sceaux and to Versailles.

The west front is bounded by the Seine and the Bois de Boulogne, and is defended by the fortress of Mont Valérien, which stands at a height of 415 feet above the river. This work is at distances of  $1\frac{1}{2}$  miles (7 English miles) and 1 mile ( $\frac{1}{2}$  English miles) respectively from the forts on either side, namely, St. Denis and Fort d'Issy. The course of the Seine from Fort Issy to the fortifications of St. Denis confers upon this portion of the city of Paris great defensive strength.

As the forts were built almost all at the same time, they have on the whole been treated almost alike as regards their defensive details; they have a bastioned trace, revetted ditches, similar arrangements of the communications within and without, and ramparts of almost the same very substantial profile. They are all rendered quite proof against assault, and furnished with the requisite powder magazines. Bomb-proof cover for the garrisons is provided partly in casemates under the ramparts, in the curtains and flanks, and partly in keeps and barracks apart; where necessary, cavaliers are added to obtain a better view of the ground in front. There are no ravelins; for this reason the more important forts have hornworks in front of them, for the greater security of the front of attack. The interior space and extent of the forts vary according to the importance of the work they are designed to perform, and the size of the garrisons allotted to them; the largest is the fortress of Mont Valérien, which has a base of some 500 paces, and the least has a base of about 300. Some of the prominent features of the fortifications of Paris, with reference to their general arrangement and

to the various points of attack, are mentioned further on in their proper places.

Excitement and agitation spread through Paris on the receipt of the news of the retreat of the French armies, which became necessary after the engagements at Spicheren, Wissembourg, Wörth. The order was given to call out the national guard and the garde mobile. In the former were placed all citizens between 30 and 40 years of age, and in the latter those under 30. The populace of Paris showed signs of a disposition to revolt. The issue of bank notes rose to a total of 2,400 million francs. The governor, General Baraguay d'Hilliers, declared the town in a state of siege, in order that he might be aided by the rigour of martial law in putting the fortress in a state of defence. This entailed serious interference with the daily avocations of the citizens, but was recognised as necessary, as no preparations had been made during the long peace, either in the place itself or in the detached forts. Attention was first bestowed upon the safety of the town itself. There was indeed a revetted enceinte with a ditch in existence, but the protection of the gates and entrances of the openings for railways and canals had in great part to be provided for. The ditches were, for the sake of the traffic of the city, crossed in some places by bridges, in others by embankments. These communications, as well as in some places the profile of the ditch, required radical reconstruction to put them in a secure state of defence. The gateways were reduced to the smallest number the traffic would allow, the drawbridges were hung and made passable, the number of railway openings was reduced as far as practicable, and they were covered by traverses. Barricades were prepared, as far as the traffic permitted, in the avenues De la Grande Armée, Du Roule, and other places, and openings that could be closed were left for the passage of the traffic. The openings of the underground canals and aqueducts at Asnières and at the Aqueduct d'Huys were covered with gratings or closed, and dams were prepared at suitable points on the Seine, as well as at the Viaduct d'Auteuil and at the Port Napoleon, in order to supply the ditches of the fortifications with water. Earthworks, constructed for the purpose, protected these dams from destruction by distant artillery fire. On the west, north, and east fronts ten bomb-proof powder magazines were formed with walls six feet thick, with coverings of strong timbers, and completely covered up with earth. At the same time that this was done the spaces around the fortresses were cleared, a measure which, in spite of the strict law on the subject existing in France, was necessary, and was remorselessly executed. Buildings and hedges were demolished, and ditches, banks, &c., affording cover to the enemy, were so sloped off as to be grazed by the line of fire from the ramparts. Where necessary, the entrances into the fortifications were protected by earthworks thrown up in front against the fire of the enemy, so as to render them more thoroughly defensible. The communications from the fortress were made impassable for a long distance,

by tearing up the causeways, by destroying bridges, and erecting barricades. A part of the iron-plated gunboats, armed each with one heavy gun, originally intended for the Rhine, was allotted to the defence of Paris and for operations on the Seine; they were commanded by naval officers, and manned by marines, and special districts and stations, well protected, were assigned to them. Thus some were in the upper Seine under the fire of forts Ivry and Charenton; others, between Meudon, Sèvres, and the island of Bellevue, at St. Cloud and Suresnes; and others on the lower Seine, under the guns of the defences of St. Denis.

The manœuvring of the gunboats was much interfered with, in spite of their small draught, by the shallowness of the water, and subsequently by the breaking up of the ice on the Seine. Excepting steamboats of some use in the defence, all the boats available for ferrying purposes were sunk in the Seine or the Marne.

The inundation of the east front of the defences of St. Denis was forthwith carried out, because it was always believed in Paris that an enemy would only have to choose between the front of St. Denis-Pantin and the front Romainville-Charenton. French military writers disputed only on this point, whether the one or the other was the key of Paris: no thought was bestowed on any other front of attack but these two. Great importance was attached to strengthening the ground in front, the sole point in dispute among French military writers; let us accordingly commence our description on the south. In front of the line of defence in that part, between Fort d'Issy and Fort Bicêtre, there runs a range of woody heights, over which are scattered villages, parks, and country houses. As the defences were designed in 1840, these heights were beyond the range of the guns of the period, and this was the reason that they were not considered. Since the introduction of long-range rifled ordnance, however, detached elevated spots, which look into the forts and hollows, have become dangerous. At the same time, therefore, that the place was put into a state of defence, as above-mentioned, the erection of detached works was undertaken, of which we name only the most important:—

1. A group of field-works on the ground in advance and to the west and south of Mont Valérien, namely, the Mühlen and Wolfsgruben redoubts, and the lunette of Suresnes.
2. A work at Montretout, immediately above the railway station of St. Cloud.
3. A work between forts Issy and Vanvres.
4. A redoubt by the side of the porcelain manufactory at Sèvres, afterwards called the Kronprinzen-Schanze.
5. A work to the southward of Sèvres, afterwards called the Jägerschanze.
6. A redoubt in the park of Meudon.
7. A work at Notre Dame de Clamart.
8. A work at Moulin de la Tour, afterwards called the Baiernschanze.

The last two entrenchments were situated upon spots commanding forts Issy, Vanvres, and Montrouge. The ramparts of

these forts were raised about 2 metres to prevent the enemy seeing into them.

9. A smaller work at the hamlet L'Hay for the defence of the ground in front of Villejuif and the Fontainebleau road.

10. The works of Chatillon and Clamart, and of Villejuif, with a defensible communication to Fort Bicêtre.

11. A work 1,000 paces to the west of Villejuif, and south-west of Fort Bicêtre; this was originally open at the gorge and was afterwards converted into a redoubt. The technical execution and arrangement of this work was praised as being a model, and we give, therefore, some details of its construction. The entrenchment was traced as a five-sided redoubt, with a ditch and parapet of a strong profile, and with a bastioned gorge. The casemates for the accommodation of the soldiers were placed under the ramparts, and constructed of wood, and their roofs were formed of railway iron. All the ramparts were arranged for artillery defence, and they had numerous hollow traverses, which served for cover for various purposes. The ditch was flanked partly by caponiers built of timber, partly by a loopholed wall, which ran along the foot of the counterscarp and likewise served as a palisading.

12. A terraced work in tiers at Cachan for eight guns to fire upon the valley of Bièvre.

13. The defences of Vitry, with a communication attached leading to Villejuif, and communications to the rear to Fort Ivry, and as far as the Seine.

14. Works of defence at Bercy, where the Seine passes into the fortress, and at Point du Jour, where it passes out of the fortifications.

15. Works to strengthen the position in front of Fort Vincennes, and the advanced position on the Marne peninsula.

16. Defences of Mont Avron, consisting of batteries, rows of musketry trenches, and arrangements for the defence of the network of buildings; the object was to take in flank the position of the blockading force on the east.

17. The defences of the position of La Courneuve, Le Bourget, and Drancy, where the roads had been made defensible: the places named had been fortified, and an independent earthwork had been constructed to serve as a keep to the whole.

18. A redoubt at Pierrefitte, northward from St. Denis, to fire upon the roads to Calais and Amiens and the railway to Creil.

19. A redoubt at Colombes, to command the peninsula of the Seine at that place.

20. An entrenchment between Billancourt and the Seine, for the defence of the passage of the river there in case it should be attempted.

21. Barricades in Billancourt, and the reconstruction of a covered trench to Fort Issy, in connection with which it was necessary to establish a means of communication over the Seine; a similar means of communication existed from Fort Charenton over the Marne to the Champ des Manceuvres.



A great number of batteries were also constructed and secured by special means, such as musketry trenches and defensible communications, of which here only the principal ones will be enumerated.

22. Batteries at St. Quen, westward of Courbevoye, for the defence of the Nanterre peninsula; these were intended, in conjunction with the work at Colombes, to fill up the great gap in the defences between the fortifications of Mont Valérien and St. Denis.

23. Batteries on the heights of Argenteuil.

24. Batteries on the flank of Villejuif, and at the mill of Saquet.

25. Batteries on the Marne peninsula, which in conjunction with forts Charenton and Nogent fired over the ground round Champigny and Champignolles.

26. Batteries at Drancy and Courneuve; these were to fire over the flat ground in front on both sides of the road to Lille.

The greater part of the works mentioned were executed during, or at the end of the defence, according as it became practicable at various periods to complete the circle of the French fortifications; for there was no other opportunity of producing much real effect on the defence.

Much astonishment was occasioned by the abandonment of the defence of Fort Vincennes from the very beginning; as the reason for this remarkable course, the unsatisfactory structural condition of the buildings there for defensive purposes was assigned, and also the necessity for retaining the work in use as a prison.

The ground in front of Paris is extraordinarily favourable in general for the construction of fortifications, and was taken advantage of for defensive works of every description: for musketry trenches—sometimes in a simple form, sometimes in successive tiers—for defensive communications between the several points important for the defence, for the conversion into defensible posts of walls and enclosures, of which a detailed list would here occupy us too long. The French understood thoroughly how to bring such works into connection both with the older and with the more recently constructed systems of defences, and thereby to prepare to the best advantage the defensible positions on the ground in front for a step-by-step defence, and for an astonishing increase in the number of guns in position. The gangs of men employed in the execution of these works could not be engineer-soldiers; men of the civil population of suitable trades were employed for this purpose, and no arms were given them, since, as is well-known, there were none to spare, especially at the beginning of the siege.

Abundant and extensive use was made of obstacles for preventing the approach of the enemy, such as abattis, trous-de-loup, wire fences, land and water torpedoes, &c., in every place where they could be applied, in front of all trenches, batteries, and minor defences. A peculiar description of ground torpedoes was discovered in the captured forts; they were exploded by friction, caused by the pressure of the foot driving in a hammer; they must have been intended for use against columns of assault, and for the defence of the breach.

It is not to be denied that General Trochu—whose head-quarters were at the hotel of the President of the Council—arranged for the construction of the defences and for the other dispositions for the defence with great ability and energy. His Chief of the Staff was General Schmidt, with General Foy as an assistant. General Trochu is the more deserving of credit for this, since he must have been actively and usefully employed on a multitude of internal arrangements, which equally demanded prudence and thought. The measure, not recognised by international law, for the ruthless banishment of all Germans settled in Paris or in France emanated from him. He ordered the removal of the boards of railway directors, and other civil authorities unnecessary in a siege, as well as the transfer of the art treasures in the museum of the Louvre to provincial towns. The seat of government had been previously moved to Tours. All who could not show that they had means of existence, or who disturbed the public order, or who in any way endangered the safety of persons and property, were compelled to leave Paris. General Trochu instituted a committee of defence, which consisted, with himself as chairman, of Marshal Vaillant, Admiral Rignault de Genouilly, Jérôme David, the Minister of Public Works, and the Generals of Divisions, Chabaud la Tour, Guiod, D'Autemarre, D'Erville, and Soumaine. The plan of defence, which the governor intended to follow in case of a siege, was in the main as follows:—

*First Circle of Defence.*—Marshal Vinoy, with his corps and the survivors of MacMahon's army assembled at Laon, defended the position at Argenteuil: General Mellinet occupied the position at Sceaux-Bourg with some regiments of the line and newly formed troops; the provincial garde mobile, with some line regiments, were at Noissy-Villiers. A cavalry corps was placed at Bourget, eastward of St. Denis.

*Second Circle of Defence.*—This included the defence of the forts which were occupied by gardes mobiles and by marine artillery.

*Third Circle of Defence.*—This comprised the defence of the enceinte, which was strengthened in rear by preparing the streets and buildings lying near for defence. Much assistance was derived from the circular railway, which was very advantageous for military purposes. It should be observed that this railway rendered most remarkable service in the preparation of works and armaments, in the conveyance of great quantities of materials, such as timber and earth for increasing the thickness of parts of the ramparts, and the construction of numerous traverses and bomb-proofs, as well as in transporting troops at a subsequent period.

*Fourth Circle of Defence.*—To this belonged the interior defence by means of barricades, dividing the streets into sections, and by the system of street-defence, projected and executed by the Emperor Napoleon for street-fighting. It cannot be denied that the fundamental idea of this system of defence was well considered, and it would perhaps have fulfilled the expectations entertained of it, if the course of events had been such as to require a step-by-

step defence, and if they had had well disciplined troops available in Paris.

On this point it remains to be stated that the particulars of the strength and composition of the army of Paris have varied, and no approximation to accuracy has been attained. The original garrison of Paris was in part reinforced by the addition of the 4th battalions of the field regiments. After the battle of Sedan there came from the north, from the neighbourhood of Mézières, Vinoy's corps, strengthened by the survivors of MacMahon's army and the garrison of the camp at Chalons, as well as probably about 100,000 men of the army of Lyons. Moreover, 20,000 labourers were formed into battalions. In the middle of September, some time before the investment, the strength of the army amounted to—

Regulars . . . . .	80,000 men.
Parisian Garde Mobile and Garde Nationale .	100,000 men.
Free Corps . . . . .	10,000 men.
Garde Mobile from other places . . . . .	60,000 men.
<hr/>	
Total . . . . .	250,000 men.

Further levies from classes whose age did not exempt them from service, however, brought the army up to nearly double this strength, or 500,000 men. A Polish legion, composed of men belonging to that nationality, though not actually under that title, and an English-North-American legion placed themselves at the disposal of the committee of defence. The Polytechnic school furnished skirmishers, and the artillery for regular duty in the garrisons of bastions 86 and 87 of the enceinte.

The Paris garde mobile and garde nationale were divided into four divisions, whose head-quarters were situated in the Palais Royal, the Conservatoire, the Elysée, and the Luxembourg Palace. The hap-hazard formation of this army, the lack of good military training and discipline, their ignorance of the mode of handling their arms, above all, the want of capable officers and non-commissioned officers made the army of Paris unfit for great enterprises, so that their numerical superiority over the comparatively weak German army of investment could not give rise to any difficulty. General Trochu made proposals to recall the army of Bazaine for the defence of the capital, which were at first approved, but could not afterwards be carried out, because the Marshal was shut up in Metz; General Trochu protested against the marching away of MacMahon's army to the north, but without result.

During the progress of the siege, however, the condition of the garrison improved, since to their numerical strength they added internal cohesion and tactical skill. The garde nationale and garde mobile were obliged to drill thoroughly, and were made acquainted with the duties on the defences, which required daily 70,000 men. In the middle of October we find the "ordre de bataille" as follows:—Commanding-in-Chief, General Trochu; Chief of the General Staff, General Schmitz; of the Artillery, General Goyo; of the Engineers, General Chabaud la Tour; Intendant General, Wolf.

*First Army.*—General Clement Thomas, Commanding; Chief of the Staff, Colonel Montagut; 266 battalions of sedentary National Guard.

*Second Army.*—General Ducrot, Commanding; Chief of the Staff, General Oppert.

1st Corps.—Three divisions, General Blanchard; Chief of the Staff, Colonel Filippi.

2nd Corps.—Three divisions, General Renault; Chief of the Staff, General Forri Pisani.

3rd Corps.—Two divisions of infantry, a division of cavalry, General d'Exea; Chief of the Staff, Colonel de Belgaric.

*Third Army.*—General Vinoy, commanding. Six infantry divisions, including the marines, and two cavalry brigades.

The defence of the enceinte was divided into nine sections, named after the suburbs in front of them; each was placed under the command of a General of Division, or Vice-Admiral, whose staff was complete in all arms and branches. The garrison of these sections consisted of national guards—generally 25 to 40 battalions to each, according to the number of bastions included in it. Strict instructions and regulations were issued for the guards at the gateways and sally-ports, and for the duty on the ramparts of the bastions.

Neither the casemates in the town of Paris, nor the bomb-proofs in the bastions could accommodate the whole of this numerous garrison. A great part of them went under canvas at Meaux, in the Bois de Vincennes, and in the Bois de Boulogne, as well as in other places, or were sheltered in tents and close cantonments in the villages lying between the enceinte and the forts. These arrangements were constantly changed. Line troops, as far as possible, did duty in the forts.

When the enormous circumference of the works to be prepared for defence is considered, every credit must be given to the engineer authorities concerned, at whose head was General Chabaud la Tour. This officer was a highly accomplished engineer, and under his direction the east front of the place, which is excellently defiladed, was executed in 1842-44; he called in the aid of civil engineers who were fit for the work, of whom it has, however, been recorded, that owing to their ignorance of military matters, a great number of demolitions were undertaken, which did not obstruct the approach of the enemy. Numerous bridges and roads were demolished, waymarks were removed, many tunnels and railways were destroyed, where no real necessity existed on any reasonable grounds. The principal demolitions undertaken in the immediate neighbourhood of Paris were as follows:—the destruction of about 60 bridges, viz., those at Sèvres, St. Cloud, Suresnes, Bougival, Marly, St. Germain, Ouen, Le Pecq, Meaux, Esbly, Lagny, Isles de Villenoy, Villeneuve, &c., and the blowing up of the railway tunnels at La Ferté sous Jouarre, Nanteuil, and of the viaduct at Chantilly.

It is well known that Trochu issued an order for the burning of the forests and woods round Paris in order that the investing

army might be deprived both of firewood for their bivouacs, and also of timber for the construction of their works. Thus the woods of Bondy, Montmorency, and St. Gratien, and the park of Monceaux were actually burnt down. The appearance of our troops on the south front, who there, and all round Paris, took up their positions with the rapidity and precision for which they are remarkable, prevented in great part the execution of this act of vandalism. Thus the large and magnificent parks of St. Cloud, St. Germain, and Meudon were saved.

The artillery in the works was under the orders of General Goyo.

The armament of Paris with artillery was pressed on most energetically, simultaneously with the preparation of the fortifications. We give the particulars of the armaments as they have been made known to us in the report of the Cardinal von Widderen, and observe that they must be accepted only as a general statement, as continual changes took place during the progress of the siege.

The armament was made up partly of heavy and partly of light naval guns; in this way many smooth-bore pieces were brought upon the ramparts.

1. The 98 bastions of the enceinte, each with 400 metres (438 yards) development of front, were each to receive 8 to 10 twelve-pounders. The gateways and sally-ports were defended by guns of a greater calibre. The carriages were of cast iron. Total 1,226 pieces.

2. The armament of the detached forts is given as follows: Charenton, 70; Vincennes, 117; Nogent, 53; Rosny, 56; Noisy-le-Sec, 57; Romainville, 49; Aubervilliers, 66; Fort de l'Est de Saint Denis, 52; La Briche, 61; Mont Valerien, 79; Issy, 64; Vanvres, 45; Montrouge, 43; Bicêtre, 40; Ivry, 70.

It is to be understood that the numbers of guns mentioned include not only the armaments of the detached forts, but also of the detached outworks in connection with them, and the auxiliary redoubts and other defensible posts, as well as a suitable artillery reserve. After the occupation of the works by the Germans, it became evident, moreover, that the above estimates were right as regarded the total numbers; we should not be far wrong in placing the total number of guns in Paris at about 2,000 pieces. An artillery park was formed in the gardens of the Tuileries.

From these facts it is clear that the proportion of artillery in Paris, as in other French fortresses was everywhere ample, although the nature of the pieces, the variety of their construction, and the description of carriages may not have been altogether suitable to the requirements of the present time. In this respect they were not in France, and least of all in Paris, so far advanced, nor so well prepared for the attack and defence of fortresses, as in Prussia. Anyone who knows the arrangements of an artillery dépôt, or the peace preparations for the artillery defence of a Prussian fortress, will be best able to judge what was wanted in such a case at Paris.

Meanwhile an endeavour was made with creditable activity, and with much judgment, to supply the deficiencies. As early as the middle of August 6,800 men (later on also women, to some extent) were employed in the manufacture of cartridges and case-shot. Considerable supplies of ammunition of all sorts were brought up from Toulon and Montpellier, where there are great cartridge factories. The large foundries and iron works in Paris were exclusively employed in preparing shot and shell, and were in some measure converted into arsenals. During the siege 251,572 projectiles for cannon and 1,000,000 bullets for mitrailleurs were made in Paris. In the engine works of Cail locomotives were built, with iron plated sentry boxes for drivers and stokers, and also iron plated trucks, in which guns were placed. Subsequently goods wagons were converted to this use, and they had plating  $4\frac{1}{2}$  inches thick. The works to resist assault were armed with guns of every description, and this was hurried on principally at Point du Jour, Auteuil, and Vaugirard, and at the detached forts.

To supply in some measure the want of trained, expert gunners, marine artillery were ordered to Paris in great numbers, and to their soldierlike bearing and steadiness under fire all praise is due.

The fire of the batteries on the works was, however, kept up with an inexcusable waste of ammunition, apparently according to no pre-arranged plan, and without skilful supervision. The cost of this waste of ammunition on the night of the 28th to 29th November alone has been estimated at 120,000 thalers (£18,000). Frequently costly projectiles were fired at solitary patrols, and objects were aimed at in other cases without any good reason that could be assigned. We refer to the destruction of the magnificent palaces of St. Cloud and Malmaison, to the laying in ashes of the towns and numerous villas there, acts that were done by the French themselves in the most reckless manner.

The garrison artillery paid not the least attention to watching their fire for the purpose of fixing its elevation and direction; similarly they appeared to profit but little by the great advantage they had on their side of being able to ascertain the distances accurately. Under these circumstances the possession of the best material was of no use to them. Nevertheless, the pertinacity and bravery of the garrison artillery in the working their guns was not to be denied, and they understood how to take advantage of the want of cover of their opponents on every occasion. The artillery fire of the forts derived substantial assistance from the guns which were mounted in the field redoubts in front of, between, and in rear of them, and in separate emplacements. Most of the forts were in fact connected with one another by a military road constructed for the purpose; from these roads trenches branched out to important points, which afforded a favourable opportunity for bringing an unexpected fire to bear on the ground in front.

During the siege particular attention was attracted to a new long-ranging gun, which fired from the fortress of Mont Valé-

rien, and strewed the batteries erected against the south front with its ponderous projectiles, as far as 9,000 paces to the westward. The French named it Sainte Valérie. The bore had a calibre of 36 centimetres ( $14\frac{1}{2}$  inches). The projectile weighed 80 lbs. ( $82\frac{1}{2}$  lbs. English). The breech closing gear was removed when the fort was given up, so that the gun was unserviceable; it is now among the captured artillery at Berlin.

*Provisioning.*—The chief in this department was the Intendant-General of the army of Paris, Wolf. With regard to the provisioning of Paris, the defence committee had to solve a very serious problem, and they performed their task so as to elicit general approval. So early as about the middle of August convoys of provisions ceased to be sent to the French army of the Rhine, since it was very well known, among those who were concerned, that their arrival at their destination was doubtful. Resort was then had to England, and shortly after, twenty-eight ships, laden with flour, left Liverpool under sail for Havre. The defence committee originally contemplated the provision of food for two million inhabitants for two months, and arranged that all the stocks of grain should be sent to Paris from the departments of the Seine and Marne, where corn is abundant, and which are also in other respects fertile and wealthy. This measure was proved to be of practical utility, and it was made more stringently operative by a decree to the effect that all stores, which were in the line of advance of the Prussians into the country, should be, without exception, destroyed. The issue of the provisions took place according to a plan, of which the preparation and execution were undertaken by a special commission.

The herds of cattle and sheep brought up by the Government were placed in the Bois de Vincennes, in the Jardin des Plantes, in the outer Boulevards, and in the Bois de Boulogne; for the want of fodder, and from the unfavourable weather, which early became very cold, the cattle suffered extremely, and succumbed in great numbers, and latterly cows were only maintained to supply milk for the hospitals and for children. The Government, moreover, took all the care that circumstances permitted; for the cattle were bought on their account, and sold, either to the butcher or the public, at a fixed price. Naturally, in the course of the siege, a great advance took place in the prices of all provisions, and the want of butter, salt, and of vegetables, eggs, and milk was much felt; the flour and wine were not exhausted even in the last days of the siege. That people were driven to killing dogs, cats, and even rats, need not much astonish us with so large a population, which included a considerable number of the poorer classes; but the inhabitants, as a whole, must have suffered much, and it is not surprising that among the aged and the children a greater mortality took place than under ordinary circumstances; this was, moreover, increased by hunger and the cold of winter. The subsistence of the soldiers was naturally a great source of anxiety; an actual failure of provisions for the troops was not experienced during the whole siege, although at the last they were reduced to

the consumption of horseflesh, salt meat, bread, and wine, and a reduction of the rations took place to 150 grammes (one-third of a pound). Prisoners and wounded, who fell into our hands in the sorties of December, had their rations for four or five days with them; as the prisoners, however, if it was proposed to send them back to the fortress, preferred to remain with us, it may be concluded that the subsistence and service in the army of Paris was not much to their taste.

The want of coals for fuel and for the manufacture of gas was much felt; and wood also, in the later periods of the siege, was scarcely to be found: severe measures must have been adopted to secure the timber-yards and the timber in the defences from plunder and depredation.

As was the case at Metz, the means of existence in Paris lasted some weeks longer than one was at first inclined to expect. What amount of provisions were actually in the town on the 19th September will never be known with any accuracy; at that time the authorities concerned apparently did not believe in the possibility of holding out 131 days, to the 28th January. In this respect the report is at length gaining credit that the stores originally existing in Paris, exclusive of the special provision made for the siege, had been seriously under-estimated; for the quantity of provisions that could have been conveyed subsequently into the besieged place, in spite of the blockade, is not worth taking into account.

The imminent failure of provisions—the actual pressure of hunger in the city—was, at any rate, one of the chief causes of the commencement of negotiations for surrender; at the time of the three weeks' truce, moreover, it was at its height. The stocks of flour and horseflesh were sufficient only for eight and fourteen days respectively; and with regard to this, it must not be overlooked that the getting in of fresh supplies, which was much facilitated by the German army of investment handing over 3,000,000 rations, and throwing open the roads for traffic, took fourteen days longer, during which time the want of provisions in Paris continued. It should be added finally, that at the capitulation the provisions of the garrison were not exhausted, so that a portion of them were available for the use of the civil population.

*Intelligence.*—Very soon after the appearance of the investing army before Paris all further communication with the country outside was cut off; the last post was despatched on the 18th September. Subsequently an underground telegraph to Tours was discovered, and also another line which was led along the bed of the river Seine to Havre; the latter was fished up accidentally at Bougival during the pontooning operations of the Prussians for the military bridge at that place, and it, as well as the former, was destroyed. A like fate befell the floating hollow balls and diving-machines;\* the Prussians had nets spread across the stream, and

\* Taucher-boten—probably some apparatus arranged to float down with the stream below the surface of the water.



caught them. Letter-carriers, disguised as sellers of vegetables, endeavoured to slip through the outposts: this also was impracticable; only five out of eighty-five returned! The only road not suspected was that through the catacombs of Paris, but the foolhardy people who ventured by it perished there; even bloodhounds undertook the conveyance of letters, but they also did not come back.

The chief part in the transmission of news was played by air-balloons, and for their manufacture and filling special factories with hundreds of workmen were established at the Northern and Eastern railway stations; they were under the management of the well-known aeronaut, Godard. A school of aeronauts was established; a committee of professional and scientific persons devoted themselves to this business. The first voyage through the air, that was of any use, was made by the aeronaut Duruof on the 23rd September; on the 8th October M. Gambetta followed him, and probably also officers, with special commissions to arrange for combined action with the generals commanding the masses of the enemy who were operating in the open field. During the period from the 23rd September 1870 to the 23rd January 1871, fifty-four balloons were sent off from Paris; they conveyed some persons who took charge of the balloons, and several hundred-weights of letters. The use of this contrivance by the public was regulated by special orders, and letters conveyed by balloon were not allowed to exceed 4 \* grammes in weight. Altogether, 2,500,000 letters, weighing about 10,000† kilogrammes, were forwarded. The ascents were made from the railway stations of the Orleans, Northern, and Eastern railways; from Montmartre, the Tuileries gardens, &c. Some balloons, moreover, strayed away to Rothenburg in Hesse, to Holland, and to Norway; of the fate of many others nothing was ever heard. Besides these larger air-balloons, there were smaller ones six to seven‡ metres in diameter, called *ballons libres*, by which letters only were sent to the care of "the esteemed finder." Captive balloons, with cords and ropes, hanging over Paris, served for observing the positions of the enemy, and for watching the sorties from the fortress.

Great numbers of carrier-pigeons had been brought from Belgium, and the prefect of Lille sent 900 of these birds to Paris just before the investment. They were generally sent out with the air-balloons—of course enclosed in cages—and were intended to bring back the answer to the balloon letters. These carriers, however, during the latter part of the siege, frequently failed to come in, and proved untrustworthy. Some were prevented from returning by the foggy weather, and some sought their Flemish homes. Of 200 carrier-pigeons let go from Paris only 73 got back. The despatches tied to them contained 70,000 words, which were reduced in size by photography. The management of the air-balloons and carrier-pigeons was entrusted to the ingenious post-master, Rampart de Chin.

\* About  $\frac{1}{4}$ th part of an oz. avoirdupois.

† About 9 tons 16 cwt.

‡ 20 to 23 feet.

Observatories were established on Montmartre, the Pantheon, and the towers of Notre Dame, which were chiefly employed in watching the flat country on the west and north-east sides. The forts were connected by underground telegraph with the several head-quarters, particularly with the Place Vendôme, and also with one another. Besides all this, visual signals—in part also arranged for use at night—were used for enabling the commandants of forts to communicate with one another.

From the fortress of Mont Valérien, which afforded the most extensive view, pre-arranged flag-signals were made; on the side of the Germans it was believed that there was always a certain warning if a sortie was contemplated, and the attention of the besiegers was always doubly increased by these signals.

By electrical light-apparatus, which was directed on the positions of the enemy before the town, they endeavoured to observe the works undertaken there at night. An ample supply of the requisite material, and excellent apparatus worked by skilful operators, were abundant in Paris, and rendered easy this mode of illumination.

On the German side there were told off for the investment of Paris the IIIrd army, under the command of the Crown Prince of Prussia, consisting of the Vth, VIth, and XIth Prussian corps, the two Bavarian corps, and the Würtemberg division, about 140,000 strong; and the IVth army, under the command of the Crown Prince of Saxony, composed of the Prussian guard and IVth corps, and of the XIIth (Saxon) corps, about 80,000 strong. The German army of investment was thus of the total strength of only 220,000 men, for the reinforcements sent from Germany had not at that time arrived.

As early as the 16th September the advanced guard of the German cavalry division, which had been pushed forward one or two marches in front of the attacking armies, appeared at Créteil, Nouilly, Corbeille, and Clamart. Their task was to destroy the telegraphs, as well as to intercept the supplies for Paris, and they were intended, on the other hand, to save the railways and prevent the demolition of the bridges; under these circumstances there occurred some minor engagements with the French detachments sent out of the forts to reconnoitre.

*September 17.*—Nevertheless the advanced guards of the IIIrd army found the permanent bridges over the Seine at Corbeille and Villeneuve-St. George destroyed. It became necessary, therefore, at once to establish a new means of crossing the Seine. For this purpose the 5th pioneer battalion formed a pontoon bridge above Villeneuve-St. George at half-past 3 o'clock in the afternoon, which was immediately crossed by the 2nd division of cavalry.

To cover the formation of the bridge the 17th brigade of infantry, with two squadrons and two batteries, had taken up a position on the heights at Limeuil, in the direction of Boissy-St. Léger. This detachment was attacked at 2 p.m. by six French battalions and two batteries. After a severe engagement in the

woods of Valenton the enemy fell back on Créteil, and the passage of the German forces over the pontoon-bridge, which had been formed in the meantime, was not further interfered with.

On the 18th September the Vth army corps commenced their march on Palaiseau and Bièvre. At Dame Rose there was a slight engagement between detachments of the 9th division and the French outposts, but this did not at all delay the further advance on Versailles.

On the 19th September a more serious encounter took place on the plateau of Petit Bicêtre, and Plessis-Piquet, which had been carefully prepared for defence. The Royal Bavarian army had also in great part crossed the Seine at Corbeille on pontoon-bridges, and was on the 18th brought forward as far as the neighbourhood of Longjumeau and Palaiseau; their IInd corps on the 19th followed the Prussian Vth corps on the road to Versailles, to which place the head-quarters of the Crown Prince of Prussia were to be transferred on the 20th September. On the French side General Ducrot, with the 13th corps, had advanced to the road from Fontainebleau and Orleans, in order to prevent the occupation of the plateaus Clamart-Chatillon and Plessis-Piquet, which were of the greatest military importance. As a point d'appui he occupied the intrenchment of Moulin de la Tour, previously mentioned, which was not yet finished. On the left the French had occupied Sceaux; their right rested on the park of Meudon.

By 6 A.M. the advanced guard of the Vth Prussian corps (King's grenadiers, and 47th regiment) had attacked the enemy, who was six times stronger than themselves. At Petit-Bicêtre a brisk engagement began, and was maintained with equal obstinacy on both sides for several hours. It did not cease until a brigade of the 1st Bavarian division, under Colonel Diehl, was sent forward in support. Later on the 10th division was directed on Villa Coublay, and the corps artillery was advanced. About 11 o'clock the enemy beat a retreat on the entrenchments of Moulin de la Tour. While a Bavarian brigade was directed on Sceaux, the 8th brigade of the 4th Bavarian division was sent to Croix de Bernis, the 7th towards Bourg; with these movements the enemy was to be out-flanked. In the meanwhile, about a quarter to 12, the enemy again made a stand, and attacked Fontenay and Plessis vigorously. The fight thickened, and the artillery took a large share in it. The French fired with six batteries from the entrenchment of Moulin de la Tour, and other strongly fortified positions in front of and beside it, the Germans from well-covered positions opposite. About half-past 1 o'clock the French ventured an attack on the Bavarian position, and then, failing of success, fell back about half-past 2. The 3rd Bavarian division pursued them with the 3rd battalion of jägers, detachments of the 14th regiment, two batteries, and a regiment of light horse, occupied the abandoned entrenchment of Moulin de la Tour, and captured there seven 12-pounder field-pieces. The French continued their retreat uninterrupted to Paris. The Vth corps had, in the forenoon, when the enemy fell back at Petit-

Bicêtre, resumed their advance on Versailles. They arrived there towards evening, took 2,000 of the garde mobile prisoners, and occupied at once the entrenchments thrown up by the French at Montretout and Sèvres. The captured works at Sèvres, and at Moulin de la Tour were henceforth named by the Germans the Kronprinz, the Jäger, and the Bavarian entrenchments. The VIth Prussian corps crossed the Seine at Villeneuve, the advanced guard by the bridge made by the Vth corps, the rest by one they had made themselves in the meantime, and went on to Orly. Its further advance was prevented by the fire from the lately-constructed but unfinished French entrenchment at Villejuif. Towards evening this redoubt was occupied by the Prussians, but unfortunately was given up again, because it was no longer tenable in the face of the heavy fire from the retired positions of the French. The army corps placed their outposts on the line Chevilly to Choisy.

On the evening of the 19th September the outposts of the IIIrd army stood on the line Bougival, Sèvres, Meudon, Bourg, L'Hay, Chevilly, Thiais, Choisy-le-Roi, Bonneville, Créteil, Champigny, Brie; in corresponding positions in rear, were the Vth corps, the Ist and IIInd Bavarian corps, the VIth and XIIth corps, and the Wurtemberg division.

At Les Tanneries, and in the neighbourhood of Bougival and Tournay, communication was established over the Seine and Marne respectively, by means of pontoon-bridges, with the IVth army. This army performed their march on Paris without meeting with any resistance; except that, between Pierrefitte and Montmagny, a slight engagement took place, which resulted in the capture, by detachments of the IVth corps, of the fortified positions occupied by the French. Le Bourget and Drancy remained in the occupation of the enemy, who did not fall back here till the 20th September. The outposts of the IVth army stood generally on the line Neuilly, Villemomble, Le Bourget, Dugny, Stains, Pierrefitte, Epinay, Argenteuil, Besons. The head-quarters of the IVth Army were in Grand Tremblay; those of the King in Ferrières, the chateau of the Rothschilds, on the left bank of the Marne not far from Lagny; from this point he overlooked the positions of the two investing armies.

The machinery of government, organised and centralised in Paris for the whole of France, was thus thrown out of gear, and all communication between the army in Paris and the armies in the field, either investing or in process of formation, was cut off.

The leader of the German army had, with unerring glance, selected the south as generally the weakest front for the principal attack; and this on a close examination was seen to have, also defensively, a special cause of weakness which we will mention here.

The fortress of Mont Valérien protects the west side of Paris. This work is intended not only to prevent any approach on the peninsula of Nanterre to the gorge of the works of St. Denis, but also to defend effectively the ground towards St. Cloud and Sèvres. The guns of the adjoining work, Fort Issy, cover the bend of the Seine at Billancourt. But in order to strengthen the position

protected by Mont Valérien in the direction of St. Cloud and Sèvres, where the effective action of the fort was weakened, not only by the distance of 4,000 to 4,500 metres, but also by the formation of the ground, the work already mentioned was constructed at Montretout, as soon as Paris was put into a state of defence. The work fell into the hands of the Prussians when half-finished. Under these circumstances the fort of Mont Valérien had to protect the ground as far as St. Cloud, where the duty was taken up by Fort Issy. Reckoning the effective range of the guns of the two works at 3,500 metres, there would remain at Sèvres and Bellevue a dead space, which was of great advantage to us. These circumstances were favourable for an approach, as secure as possible, to Fort Issy and also to Point du Jour. The exit of the Seine, moreover, weakens the latter point, which we should probably have selected, in case of need, for an advance on Paris.

Viewed in this light, as the result shewed, the determination to take up a position on the south of the fortress and direct the principal attack on that side was most fortunate, and the immediate capture of the works, which had been just thrown up by the French in preparation for the siege, had the most important results on the progress of the attack.

The next step was for the investing army to establish itself firmly in the positions which it occupied, that not only should all communications be cut off between the capital and the people of the country, but it should also become impossible for the garrison, in spite of its superiority of numbers, to break through and establish communication with the French armies of the north and south, which were in process of formation or in the field; that in fact the French, at every point of the girdle around them, might be so long held at bay as to allow the German troops to arrive in sufficient force to drive them back into the fortress. Each army corps had its own well-defined position of the circle of investment, which it had to occupy and strengthen by suitable works of fortification. The redoubts captured at the first onset of the German army afforded a strong point of support, for which purpose they were turned about towards the enemy, the original gorge being converted into the front of the work, and the entrance made upon our side. At a greater distance points of support were also found in the numerous villages, which from their very massive construction were well adapted for the purposes of defence. The approaches to the villages were, therefore, barricaded, the communications of every kind repaired, walls favourably situated were provided with loopholes and banquettes, alarm posts were established, and huts built to shelter those troops who were held in constant readiness.

The principal objects during the whole of the operations of the investment were the construction of works for the security of the troops at a greater or less distance from the forts, and the establishment of a line of obstacles to be defended by musketry. This was intended to compel the enemy to deploy

his forces as slowly as possible, and to give our troops time to occupy the line of works in rear. In the line of obstacles openings were left in case of our being able to take the offensive. The obstacles consisted of abattis, and the existing walls and buildings, which were made capable of defence. The line of defences behind these obstacles, and prepared in a similar manner, was principally occupied by infantry, owing to the ground in front not being generally exposed to view. According to the nature of the ground, greater or smaller entrenchments were formed in this line of defences, and partly in front, partly in flank or rear, artillery emplacements were made and strongly secured by works to resist the sorties in force, which were to be expected subsequently.

It would take too long to enumerate the several works of this kind in the circle of investment; we will take, therefore, only one section of the ground, and select that which the Vth and VIth corps had to occupy and arrange for defence.

The Vth corps had the ground between Meudon and Bougival to defend. The line of obstacles in that quarter comprised the northern boundary fence of Meudon, was continued by rifle-pits, &c. round Bellevue to the Crown Prince battery, and followed thence the steep slope to St. Cloud, as far as the Montretout redoubt, where a gap occurred for the attack of the ground in front of Mont Valérien. Abattis and rifle-pits crowned the heights of Garches, and led on to the eastern boundary of Bougival, ending here on the Seine. The line of obstacles was flanked along its length by being broken back in some places, by block-houses on it and annexed to it, and by the Crown Prince and Montretout redoubts. The line of works in rear began in the east with the parks of Chalais, Meudon, and St. Cloud, which were arranged for defence; a series of entrenchments led over the plateau of Garches to the stud enclosure, which, as the centre of the position, was secured by abattis, a number of batteries, and self-defensible earthworks, and so on in the same manner to Bougival. In rear of this line, on the edge of the plateau towards the villages Ville d'Avray, Marnes, and Vaucresson, emplacements were arranged for batteries and strongly defended with works.

The VIth corps had to cover the ground between the Seine and Bièvre, beginning at Villeneuve-St. George, the same place where subsequently were the two bridges allotted for the use of the siege-train. Next was the northern boundary of Choisy, particularly the churchyard, which was fortified in the most formidable manner, barricaded, and rendered completely secure against the assault of infantry. Opposite, lay the village of Vitry, also fortified by the French, and close at hand were some gunboats on the Seine. Further to the westward, and within our position came the villages of Thiais and Choisy, both fortified; opposite, but in the possession of the French, were Villejuif, which was also fortified, and a redoubt at the same place, both covered by Fort Bicêtre. At the junction of the high roads to Versailles and Fontainebleau

and inside the German position lay the strongly entrenched farm of La Belle Epine, the central point of an artillery position containing 84 field guns, strengthened and covered by shelter trenches for six battalions; and next to it, pushed forward on the slope of the right bank of the Bièvre, was the village of L'Hay with the wall skirting its edge arranged for a determined resistance, being the point of support for a brigade.

Opposite lay the enemy's redoubt of Haute Bruyeres (Cachan) covered by Fort Bicêtre. The outposts of the Prussian position at this point were also protected by a line of obstacles with shelter trenches and other arrangements for defence, whilst the section of ground to be held was rendered secure by formidable fortified posts and entrenched emplacements for the employment of masses of artillery.

In the low country eastward of St. Denis, where the French positions were protected by inundations, the Guard Corps had in a similar manner rendered the section from Séoran to Dugny impassable by damming up the Morée stream, so that only two narrow defiles were available, namely, at Port Iblon on the embanked high road of Lille, and at Aulnay. This inundation was defended by the strongly fortified villages of Dugny, Le Blanc-Mesnil, and Aulnay, which were somewhat retired, Le Blanc-Mesnil being the centre of the defence. Shelter trenches and positions for artillery were formed on the undulating ground in rear of the inundation, and gave a great power of resistance to the section of the ground. Opposed was the French position as described at par. 17, page 129, and, from a consideration of their mutual position, it is easy to understand why the village of Le Bourget became the object of constant attacks from both sides. The intended inundation of the Morée by the Germans would hardly have succeeded on account of the small supply of water, had it not received a considerable contribution by damming up the Ourcq canal at Sévran. This arrangement proved further disadvantageous to the enemy by reducing the supply to the St. Denis inundation and withdrawing a certain quantity of drinking water from the inhabitants of Paris. The execution of this interesting work was entrusted to Captain von Krause of the Engineers. When the inundation froze during the winter it had to be broken up in a number of places.

The establishment of communications by constructing roads for the supply and transport columns, and providing them all with guide posts for the information of the troops, caused considerable labour, as did also the erection of barricades of all sorts, and the building of bridges and roads for the communications between the corps; of this kind were the bridges built at Le Pecq, Bougival, Les Tanneries, Triel, Villeneuve, St. Georges, at Gournaz over the Marne, at Chatout, two at Corbeille, without counting many other foot-bridges over brooks and hollow roads. In places where it was necessary, these structures were secured against a coup-de-main by an entrenchment.

Later, when the winter set in, it required great care to preserve them, or some at least, from the floating masses of ice on the Seine; a few had to be removed and the permanent bridges lying far in rear of the investing army to be utilized.

With regard to the tactical considerations of the besieging army, it was above all things necessary to adapt the defence in the best manner to the peculiarities of the ground. Each division had about one-fifth to one-sixth of its strength on outpost duty. These, together with the picquets (sometimes with guns attached), and the supports, had fortified the particular point indicated to them where a stand was to be made, and had instructions to receive the enemy in that position. The woods and undulations of the ground, which limited the field of view towards the enemy, made the erection of observations a necessity for the investing army; one was on the Marly aqueduct which carries water for the fountains at Versailles over the Seine on 36 arches at a height of 643 metres above the Seine; this was often used by the Emperor-King on account of the distant view it commanded; besides this there were others, viz., in the redoubt of Moulin de la Tour, at Malmaison, at Bougival, at the Lantern of Diogenes, in the Villa du Barry, at Sèvres, at Le Blanc-Mesnil and other places. Semaphores also were erected for signalling by day and night.

At the principal commands intelligence-bureaux were established, and a service for the transmission of important orders by mounted orderlies, organised in relays, posted partly at the picquets, and partly at cross roads. Independently of this, all divisional staffs were connected with the corps, and head quarter staff, by means of the field telegraph.

As occurred before many other French fortresses, so at Paris, the bearers of flags of truce were fired upon, contrary to all the customs of war; this happened, for example, on the 1st of October to Lieutenant v. Rissing, and on the 23rd December to 1st Lieutenant v. Uslar.

The destruction of the tunnel at Nanteuil, to which allusion has already been made, did not particularly increase the difficulties of the advance of the IIIrd army, but it was a serious obstacle in the formation of the siege parks. During its restoration, when the temporary wooden supports were nearly completed, the whole gave way in consequence of the pressure of the superincumbent chalk, so that recourse had to be made to a branch line to turn the obstacle, which was finished in the latter part of November. With the fall of Soissons, a second line of rail became available for the besiegers on the east side, but on the west and north-west front the line of communication to the rear by Laon and Compiègne was only opened after the fall of La Fère.

At the beginning of the siege, in consequence of the want of railway communication with the provision magazines in rear, the supply of the armies was a very difficult task; it required the greatest activity and foresight on the part of the commis-



sariat officials to carry on the duty in a satisfactory manner. In addition to the regular service of supplies of all kinds from Germany, which were accumulated in the magazines in rear of the investing army, necessity soon required the levy of requisitions in the districts beyond the immediate neighbourhood, which had been already exhausted by the French. Opinions have been expressed very strongly against this mode of requisitioning, without recognising the laws of war by which an army has to support itself in an enemy's country. Requisitions of this sort required convoys, as not only was the populace hostile, but collisions with the *francs-tireurs* were of constant occurrence. The escorts for them were provided by detachments of cavalry accompanied by infantry on wagons. When, during December and January, the railway by Amiens and Laon, and the lines to Rouen and Orleans became available, the supply of provisions was an easier task; as an illustration of the requirements, we may add, that the daily provision and forage transport for a single army corps was about 5 trains of 32 wagons each. The daily provision and forage supply for the armies before Paris was about the following: 148,000 three-pound loaves, 1,020 cwt. of rice or grain, 595 bullocks or 1,020 cwt. of bacon, 144 cwt. of salt, 9,600 cwt. of oats, 2,400 cwt. of hay, 28,000 quarts of brandy.

After this description of the circumstances of the investment, we shall notice next the principal sorties, and after them, the artillery attacks which led to the fall of the capital.

The object of the smaller sorties was to molest and alarm our outposts, as well as to make demonstrations for special purposes; they never caused any important interruption in the works of the investment or siege, and did not appear to have that purpose in view; it was only in the last days of the siege, about the middle of January, that small sorties were made against the batteries of the attack on the south front. The sorties *en masse*, however, played an important part, having no less an object than to pierce the investing line, and form a junction with the French armies operating in the north, south, and west.

Such sorties were preconcerted with the commanders of the armies in the field, who were probably informed of the intended operations by means of the balloon post. We received information of these undertakings, days and weeks beforehand, partly by means of prisoners or deserters, partly also by the visible stir on the other side, so that we were always found prepared. These lengthened preparations were probably necessitated by political reasons, such as to tranquilize the Parisian populace, who, in ignorance of the true state of things, were pressing for sorties which could have no good result. The march of large bodies of troops towards the locality of the intended sortie, which took place generally by means of the circular railway, conspicuous on its embankment, as well as on those sections of rail leading beyond the works, and the movement of the troops between the enceinte and the outer forts, could not escape the notice of those in the observatories, or in the German outposts.

It was in consequence of the movement of troops out of Paris on the 19th of September, that St. Cloud was occupied on the 21st of that month.

September 23. The French undertook small reconnaissances directed from St. Denis against Pierrefitte, from Aubervilliers towards Le Bourget, and from Fort Bicetre against Villejuif.

September 24. The outposts at Sèvres and St. Cloud were engaged with some gunboats stationed at Suresnes.

On September 30 there was a more considerable sortie, which the enemy had announced on the 27th and 28th by changes in the positions of the troops outside the fortress. General Vinoy attacked the 12th division with six battalions between Choisy le Roi and La Belle Epine, supported by Forts Montrouge and Bicetre, whilst he made demonstrations on his left wing with a brigade against the XIth corps, and on his right wing with three battalions against the Vth corps at Sèvres and Meudon. At Bas Meudon he threw a bridge over the Seine. The fighting began at 6 o'clock in the morning and turned on the possession of L'Hay, which was bravely defended by the 23rd regiment, but had eventually to be evacuated. It was soon perceived that the attacks on the wings were only demonstrations; the VIth corps therefore concentrated its reserves, and, supported by some Bavarian detachments, drove the enemy again out of L'Hay behind his entrenchments. General Guilhelm fell here and his body was handed over to the French next day. These estimated their loss at 1,200 men; on the German side there were 80 killed and 300 wounded—but 300 unwounded French prisoners were taken. It is not known whether the French intended to pierce our lines on this occasion, or only to destroy the passages of the Seine; or perhaps to retaliate for the check they had received on the 19th September.

On the 3rd of October the headquarters of the King were removed from the Château of Ferrières to Versailles.

After frequent alarms on both sides, and much useless cannonading from the forts, the next sortie took place on the 7th of October; on this occasion also there were great movements of troops on the preceding day to the entrenchments in rear of d'Ivry and Bicetre. Probably this was only a demonstration. But, in the afternoon, a French force of all arms marched out of Fort Mont Valerien towards Rueil, returning towards the evening, having covered the destruction of part of our line of defence at Malmaison.

On the 13th October the palace of St. Cloud was set on fire by the guns of Mont Valerien, without any apparent reason; the 5th jäger battalion, and the 58th regiment attempted to save as much as possible from the flames. The same day 10 French battalions of Blanchard's division, with cavalry and field guns, advanced in three columns against the position of the IIInd Bavarian corps, and drove their outposts out of Chatillon and Bagneux; the enemy had his reserves in readiness behind Fort Montrouge, in case the capture of the heights of Chatillon and

the Bavarian redoubt should succeed. After a combat of six hours duration, in which first the 8th, and then the 7th Bavarian brigade took part, the enemy was driven back with considerable loss. In this sortie, which in the French reports is described as an "offensive reconnaissance," the guns from the French redoubt, constructed on the height between L'Hay and Villejuif, gave a good support, and annoyed the Bavarian right flank considerably; their loss was 10 officers and 360 men.

October 14th. A sortie of several French battalions was repulsed by the piquets and some guns of the XIIth corps.

At this period the 22nd division under General von Wittich, and the 1st Bavarian corps under General von der Tann were withdrawn from the investing force, in order to operate against the French army which had been formed in the south. On the other hand the guard landwehr divisions had arrived before Paris, and numerous changes were made in the positions of the troops.

In the night of the 19th-20th of October a lively fire was kept up by the forts, and repeated night attacks by strong infantry detachments were made against our outposts at Chevilly, that is to say, in the direction of Orleans, but without any result whatever.

October 21st. The sortie made on this day against the Vth corps was preceded by a heavy fire from Fort Mont Valerien, which was continued later from the gunboats stationed on the Seine; the latter fired principally against St. Cloud and Sèvres. The following troops were drawn up under the command of General Ducrot: General Berthaut with 3,400 men, 20 guns, and one squadron, between the railroad to St. Germain and Rueil; General Noel with 1,350 men and 10 guns, to operate against Bougival and the park of Malmaison; Colonel Colleton with 1,000 men and 18 guns, to keep up the communication between the two first-mentioned columns, and also to join in the attack on Bougival. Besides these there were two main columns of reserve, one under General Martenot with 2,000 men and 18 guns, the other under General Paturel, consisting of 2,000 men, 28 guns, and two squadrons. The whole, roundly speaking, 10,000 men, 94 guns, and three squadrons, under the supreme command of General Ducrot, were in position an hour after mid-day, supported by the fortress of Mont Valerien. The attack was directed against the 10th division on the line Bougival, Malmaison, Garches. The 19th brigade formed the outposts, with the 46th regiment as the left wing, and the 6th regiment as the right; the 20th brigade in reserve. Towards 3 o'clock in the afternoon four of the enemy's battalions attacked the park of Malmaison; after an obstinate fight they were repulsed by the 46th Regiment, two battalions of the 6th regiment, and detachments of the 1st guard landwehr regiment; whilst this attack was in progress the enemy directed another against La Celle, which was beaten back by portions of the 50th regiment; the 5th and 6th companies of which, assisted by some men of

the 6th regiment, captured two guns, and brought them safely away, notwithstanding the heavy firing of the enemy. On the right wing the advanced troops of the 9th division were engaged. The batteries of the IVth corps at Chatou and Besons, on the right bank of the Seine, co-operated with good effect towards the end of the fight, which terminated at 5 o'clock in a general retreat of the enemy towards Neuilly and to Fort Mont Valerien, under cover of the guns of the latter place. The troops which had taken part in the sortie retreated very slowly to the fortress, so that the Prussian detachments had to remain under arms until late in the evening. In Versailles the troops had taken up their defensive positions. Our losses in this combat are given as 15 officers and 297 men killed and wounded, whilst those of the enemy were 28 officers and 232 men, exclusive of 300 prisoners.

A small sortie took place at the same time against the Würtemberg division: three battalions, supported by the Faisandrie redoubt, crossed the Marne at Joinville and advanced against Champigny, but were repulsed by the 2nd jäger battalion and part of the 7th regiment with a loss of 3 killed and 30 wounded.

The fight on the 30th October at La Bourget, which was occupied by only one company of the Guard, was of more importance; the village had been attacked on the 28th by superior French forces from Fort d'Aubervilliers, and the garrison driven out. The place lay under a cross-fire from the forts at St. Denis, d'Aubervilliers, and Romainville, and the French made every effort to secure this advantageous position and fortify it. An attempt was made on the 29th to drive the enemy out of Le Bourget by the fire from the batteries in rear, but it failed.

The re-capture of this post of such importance to the Prussians was, therefore, ordered for the 30th October; the 2nd division of foot guards, under the command of Lieut.-General v. Budritzky, was told off for this service. It was arranged that a right column consisting of two battalions of the Franz regiment, a centre column composed of the 3rd grenadiers of the guard, and one battalion of the Queen's (Konigin) regiment, and a left column of two battalions of the Alexander regiment, with three companies of the battalion of sharpshooters of the guard, the whole supported by artillery and engineers as well as the necessary reserves, should attack Le Bourget simultaneously, and, if possible, cut off the retreat of the enemy on St. Denis. Preparations had also been made for the attack to be supported on both flanks by other troops of the investing force.

Le Bourget was occupied by 6,000 men, besides a reserve of several battalions on the Paris road.

The combat was opened at 8 o'clock in the morning by a fire from retired artillery positions in the lines Garges-Aulnay; the left column was immediately set in motion, crossed the Moleret stream without much resistance, and reached the road south of Le Bourget, drove the enemy out of his entrenched position, and

forced the reserve into a hurried retreat. In the meantime the other columns had advanced to storm Le Bourget, where a most obstinate hand-to-hand fight took place in the streets and houses. The brave General von Budritzky led his troops in person, flag in hand, against the barricades at the northern entrance to Le Bourget, followed by Colonels Count Kanitz and Von Zaluskowsky, the latter of whom was killed in the street of the village.

On the other side the Augusta regiment had pushed into the village; its colonel, Count Waldersee, who had only just rejoined after recovery from a severe wound at Gravelotte, fell here, with another officer, by French treachery, having been shot from a house, the defenders of which had lured him on by the waving of handkerchiefs.

In consequence of this the fight was continued with the greatest bitterness by the Prussians; Le Bourget was in their possession by half-past 12 o'clock. The Prussians lost 35 officers and 449 men killed and wounded. The French 30 officers, 1,250 unwounded prisoners.

According to the statements of the prisoners, and judging by the large supply of provisions captured at Le Bourget, the enemy seem to have intended to include this place in the line of their fortified outposts and to construct large works round it. However, the result was different from what they had proposed, for the 2nd pioneer company of the guard, under the command of Captain v. Spanckeren of the engineers, which had particularly distinguished itself in the battle field, immediately prepared to construct the defences of the place.

The failure of the French sorties caused great dissatisfaction in Paris, and led to a rising in the night of the 30th-31st of October, in which, however, the mob was crushed by the troops at the disposal of Government. In the first days of November, there were negotiations which extended over a period of five days for the conclusion of an armistice, but without result. The IIInd Prussian corps, which arrived before Paris in the latter half of November, was attached to the IIIrd army, and went into cantonments in rear of the VIth Prussian and IInd Bavarian corps, from Longjumeau to the Seine. At the same time the XIIth (Saxon) corps moved its left wing across the Marne, and the Würtemberg Division closed towards the VIth corps. The latter was transferred to the IVth army after the sortie of Le Bourget, with instructions to operate against the bands of franc-tireurs that were making their appearance in rear of the position, and especially at Meaux and Lagny on the line of communication. For this purpose a battalion, accompanied by one squadron and two guns, was despatched as a flying column to Nangis, and succeeded in capturing with small loss, 5 officers, 597 men, and two guns.

Although after the fight at Le Bourget the conflicts between the outposts were of less importance, and the extravagant waste of ammunition from the forts was diminished on the whole, yet,

towards November, there were indications of an important sortie, probably in the south or south-east; in which direction General Trochu hoped to effect a junction with the army which had been organised in feverish haste by Gambetta, and was pushing forward to the relief by way of Beaune under the command of General de Paladines.

On the 29th of November a sortie was made against the position of the VIth corps at L'Hay, Chevilly, Thiais, and Choisy le Roi. It began with a heavy cannonade during the night of the 28th-29th November from some of the southern forts, apparently for the purpose of fatiguing our troops, who had, in consequence, to be under arms during half the night. Some works of fortification, which were in progress at the time, had, therefore, to be given up for the moment; among them the construction of a redoubt at Villa Coublay for the defence of the siege parks. The attacking columns of the enemy were launched from Arcueil and Vitry against L'Hay, whilst the two wings were directed on the villages of Thiais and Chevilly, lying on either side of the Fontainebleau road. The enemy's strength was about 3,000 men, but he found the VIth corps in a strong position to receive him.

After a hard fight of three hours, without any result, the French were thrown back, leaving 2 officers and 200 men in the hands of the Germans; the latter, sheltered behind their strongly entrenched position, never permitted the French to develop their forces, and caused them great losses both in killed and wounded; on our side the loss was 200, of whom 3 officers and 32 men were killed.

On the 30th of November, the battle was renewed with increased forces, under the personal command of General Trochu; an attempt was made to penetrate the lines of the Würtemberg division, on the ground in front of the peninsula of St. Maur. The enemy commanded the ground where the Marne bends to the south, the villages of La Varenne, Pont Mesnil, and the district behind St. Maur, including the wood of les Fosses, by means of Forts Charenton and Nogent, and the works thrown up in advance. Near Créteil is Mont Mesly, which is high enough to be regarded as the commanding point of the surrounding country.

The concentration of the enemy's forces took place near Fort Charenton, in the camp of St. Maur (Forest of Vincennes), and between Forts Rosny and Nogent.

The first offensive movement was from Fort Charenton against the hill of Mesly; the second from Joinville, towards Champigny; and the third from Nogent, directed against Brie and Villiers. The three companies of Würtembergers, forming the garrison of Mesly, were unable to resist the overwhelming attack made against their position at daybreak, and fell back on their supports, whilst the enemy took possession of the Mesly heights and brought two batteries into action on them. An artillery fight now developed itself, whilst the division of Würtembergers

formed up and advanced against the heights with the 2nd and 3rd brigades, and re-captured them, after heavy fighting, about mid-day. They were supported by the 7th brigade of the II<sup>nd</sup> corps, which was in position with one battery at Villeneuve St. Georges, and joined in the attack from the side of Valenton, thus taking the enemy in flank, and preventing the action of the reserves, who were forced in consequence to retreat from the wood of Créteil, to the village of that name and Fort Charenton.

How gallantly the Würtembergers fought may be gathered from the fact that their losses were 40 officers and 700 men, whilst according to General Trochu's report those of the French amounted to nearly 2,000 killed and wounded.

At Champigny and Brie, the Würtembergers had been relieved just before daybreak by the Saxons; six companies of the latter occupied these places, but they were obliged to give way before the advancing French columns, who immediately took possession of the village of Villiers, lying more to the north. The French did not attempt a further advance against the German main position. In the meantime the reserves had come up. The Germans, namely, the 48th infantry brigade (Saxons), and the 1st Würtemberg brigade, drove the enemy with great bravery out of Villiers, though Champigny and Brie remained in the hands of the latter. In the afternoon the fight raged with the greatest bitterness between Neuilly and Coeuilly; the infantry fighting for the possession of the villages, whilst the artillery were posted in the intervals; between Noisy and Villiers alone, there were 42 guns of the XII<sup>th</sup> corps in action. The fight which had been carried on with the greatest determination on both sides, was only brought to a close by the approaching darkness.

This sanguinary day, which cost the Saxons 29 officers and 879 men, and the Würtembergers 1,500, whilst they captured 940 prisoners, gave the impression that the French had made every effort to break through the German lines; for not only had all the preparations been carefully planned for this purpose, five bridges constructed over the Marne, and a supply of fresh troops always at hand, but offensive movements had been directed against other points of the investing army. A continuous cannonade was kept up from all the forts, and even iron-plated railway wagons and gun boats, the latter on the Seine and Marne, had been set in motion to flank the battle field. Sorties were made on both flanks of the battle field, namely, against the XII<sup>th</sup> corps in the direction of Chelles, and a second time against the VI<sup>th</sup> corps at Chevilly. At the latter place the entrenchments were held; and the enemy advancing from his fortified position, was thrown back as early as 11 o'clock, so that the VI<sup>th</sup> corps was able to detach 6 battalions, 2½ squadrons, and 2 batteries of horse artillery through Villeneuve St. Georges, to the assistance of the hard-pressed Würtembergers. At 3 o'clock the French renewed their attack, which was repulsed with comparative ease.

Simultaneously with these sorties to the south and south-east of the fortress, others were undertaken from St. Denis against the positions of the IVth and guard corps, as well as from St. Cloud against the Vth corps, but without result; the enemy brought about a brigade into the field at these points. All round the city there were therefore engagements with the enemy. General Trochu had made a great noise in Paris about his victories at Champigny and Brie, nevertheless he found it necessary to maintain himself quietly next day in the positions which he had occupied.

On the 1st of December, the troops did not come into collision, but the French demanded an armistice until 4 o'clock in the afternoon, for the purpose of burying their dead.

In consequence of an order, to be prepared under any circumstances for a renewal of the attack, the whole IIInd corps was brought over to the right bank of the Seine, and on the night of the 1st-2nd December took up a position between Coeuilly and Chennevières as reserve in rear of the Würtembergers; a measure which proved to be most useful. The portion of the XIIth corps on the left bank of the Marne, the IIInd corps, a brigade of the VIth corps, and the Würtemberg division were placed under the command of General von Fransecky, commander of the IIInd corps. At dawn on the 2nd of December at 7 o'clock, the 1st Würtemberg brigade, in company with the Saxons, renewed the attack on Champigny. They succeeded after a short time in taking the village, but the Germans could not maintain themselves there, on account of the defences in the place, and the constant arrival of fresh troops on the field, which were brought by the railroad passing close to Fort Nogent. The 7th Prussian brigade, under the command of General du Trossel, advanced to the attack from Chennevières at an opportune moment, but, as the lower part of the village of Champigny was under effective fire of the heavy guns, the Germans were only enabled to keep their hold in the upper part of the village. The 3rd infantry division, and the whole of the corps artillery had been in action in Champigny and on the line Champigny-Villiers since 9 o'clock in the morning; whilst the 8th brigade and a brigade of the VIth corps remained in reserve at Chennevières.

After 10 hours hard fighting, the firing ceased here about 5 o'clock in the afternoon. The 24th (Saxon) division had been ordered to re-capture Brie; about 8 o'clock in the morning, the place was attacked and the enemy driven into the lower part of the village, where he made a stand covered by good artillery positions. The fight in and round Brie came to a standstill. As the enemy in his well-entrenched position, was constantly receiving reinforcements, it was impossible to get possession of the whole of the village, notwithstanding the devoted bravery of the 1st and 2nd battalions of the sharpshooters, of the 107th regiment, and a battalion of the 104th regiment. Although the Germans had a numerous artillery at their disposal, the ground was so unfavourable that it could not come fully into action. Round Villiers,



and especially in the park, which was bravely defended, first, by the Würtembergers, and afterwards by the Saxons, the fighting continued with great courage on both sides. At nightfall the enemy retired. The losses of the Saxons on this day amounted to 55 officers and 1,096 men, those of the Würtembergers were 48 officers and 700 men. The troops went into cantonments in the villages on the battlefield, in order to occupy on the morning of the 3rd December the positions previously held by them. The French repeated on this day some offensive movements against Champigny, but without any energy; they maintained themselves however at Brie. The II<sup>nd</sup> corps lost, on the 30th November, and the 2nd and 3rd December, 89 officers and 1,517 men.

The concentrated position taken up by the Germans on this day behind Champigny and Brie, induced the French to retire from the places remaining in their possession; they retreated from all points across the Marne, removing the bridges of boats after crossing the river. The necessity for strengthening this position with additional fortifications was now recognized, and strong detachments of pioneers were ordered to the spot from the south front.

Thus these great efforts of the French to break out, for which purpose 70,000 of their best troops had been brought into action on the 30th of November and the 2nd of December, were repulsed without their having been of the slightest advantage to them; they failed as on former occasions from not following up with resolution the advantages which had been gained by a vigorous attack. General Ducrot, who commanded on the 2nd and 3rd December, and had five horses shot under him on the first day, paid a tribute to the bravery of the German troops in his general orders. The occupation and fortifying of Mont Avron by the French, on the 28th of November, was highly disadvantageous to us.

Nearly three weeks passed without any sorties from Paris; in the meantime, an attempt was made on the French side to form a junction of the army of Paris with that of General Faidherbe, commander of the northern army, and, at the same time, to threaten our north-easterly line of communication. The enemy had also in view the molestation of our works in progress for the bombardment of Mont Avron. This led to a sortie "en masse" on the 21st of December, of three divisions under the command of General Ducrot, directed against the north-easterly portion of the investing line in two simultaneous attacks, each on two roads. One attack was covered by Forts St. Denis and d'Aubervilliers, the other by Forts Romainville, Rosny, and Nogent. The advance was made against four points: Stains and Le Bourget defended by the guard corps, and Sévran and Chelles which were held by the XII<sup>th</sup> corps.

On the afternoon of the 20th of December, the movement of large bodies of the enemy's troops out of St. Denis was noticed; the guard corps therefore made the necessary dispositions. It

was not possible on the morning of the 21st December to make out at what point the enemy intended to attack. Suddenly Le Bourget, which was garrisoned by one battalion of the 3rd regiment of guards, and one company of sharpshooters, was unexpectedly assailed from the northern side, the churchyard was captured and 125 men taken, but the southern edge of the village was bravely held. With the assistance of three companies of the 3rd grenadiers of the guard, and two companies of the sharpshooters of the guards, who were sent to the succour of the hardly-pressed garrison, they succeeded after a hard fight in driving the French out of the village at 3 o'clock in the afternoon. Three officers and 356 men were taken prisoners.

Almost at the same time Stains, which was garrisoned by the 2nd battalion of the 1st regiment of guards, one company of the 3rd regiment of guards, and the fusilier battalion of the 1st regiment of guards, the latter in reserve, was attacked, under support from the guns of St. Denis; but the enemy failed to penetrate into the village and had to retire. The forts bearing on the field of battle kept up a heavy fire during the entire day, supported by a numerous field artillery, against which only six batteries of the guard corps were in action; towards evening the firing ceased, and the Prussian troops were enabled to take up their old positions. Three officers and 356 unwounded prisoners fell into the hands of the Prussians; our loss was 14 officers and 400 men, that of the French considerable; they had 40,000 men under fire.

On the 19th and 20th of December, demonstrations had been made from Mont Avron towards the Maison Blanche and Ville-Evrart, against the XIIth corps. In the afternoon of the 20th December, the enemy concentrated about two divisions and 11 batteries at Noisy-le-Sec, under the command of Generals Malroi and Blaise; this force was further strengthened during the night by means of the railroad. Fresh batteries were unmasked on Mont Avron. About mid-day the enemy attacked from Neuilly; Maison Blanche and Ville-Evrart, which were only held by our outposts, were lost. A further advance against the very strong position of the 24th division at Chelles was prevented by the flanking fire of the Würtemberg Batteries, Nos. 7, 8, and 9 at Noisy-le-Grand, and by the overflowing of the Marne. As soon as the 24th division was completed by the arrival of the five battalions of the 101st and 107th regiments, the 13th jäger battalion, all of which had been detached to support the guard corps, and also nine batteries which had taken up a position at Livry, it advanced against Maison Blanche and Ville-Evrart. The former was immediately taken by storm, but the fighting round Ville-Evrart was most obstinate and only ceased at midnight, when 500 French were made prisoners; the place had to be evacuated on account of the rising of the river. The Saxons lost on this day 1 officer and 40 men, most of them slightly wounded.

On the 21st December, the 4th infantry division was placed in reserve behind the XIIth corps, and the 8th brigade, together

with four batteries, was advanced as far as the bridge over the Marne at Voires, but there was no collision with the enemy.

Whilst these sorties were in progress, the French made demonstrations at several points, for instance, from Fort Mont Valérien towards Montretout and Buzenval; the outposts of the 5th jäger battalion sufficed to repel them. Besides this, a heavy and useless shell fire was kept up from the forts against the corps not attacked.

On the 22nd of December, two French brigades advanced along the Marne against the left wing of the XIIth Corps, but two Würtemberg batteries placed at Noisy soon compelled them to retreat.

On the 15th of January, there were more sorties of the Paris garrison against the position of the guard and XIIth corps in the direction of Le Bourget, Dugny, and Mont Avron, which were repulsed by the German troops. It is not impossible that the larger sorties on this front were in connexion with the operations of General Faidherbe in the north; though they may only have been intended to disturb our preparations for the attack on Mont Avron.

In the last days of December and during January, whilst the artillery attack was being developed, the political and social condition of the beleagued city was becoming more serious. All hopes were based on the success of a sortie "en masse." General Trochu yielded eventually to pressure, and on the 19th of January an attempt was made from Mont Valérien with 100,000 men to pierce the position occupied by the Vth army corps and the guard landwehr division. In the event of a success, a further advance was to be made on Versailles, the seat of the Royal headquarters.

At 8 o'clock in the morning, three columns were seen debouching from the immediate neighbourhood of Mont Valérien; the right column, under command of General Ducrot, was to operate along the Seine towards Rueil; the centre column, under General Bellemare, was to reach the plateau of La Bergerie (the heights of Garches), and the left column, commanded by General Vinoy, was to capture the redoubt of Montretout in order to support the attack in the centre.

The Prussians had occupied the heights of Garches, as well as the chateau and park of La Bergerie, as a point of support to the position. The French attack, carried out with superior forces and great energy, only caused the Prussian outposts to retire on their supports, but they did not succeed in taking either La Bergerie, which was bravely defended by one battalion of the 59th regiment and a company of jägers, or the village of Garches; General Ducrot arrived on the battlefield too late to co-operate with good effect at the right moment. Meanwhile, the Prussian reserves had come up, and a hard fight ensued for the possession of the heights of Garches. They were stormed about 2 o'clock in the afternoon by two battalions of the King's grenadiers, with

detachments of the 59th regiment and the 5th jäger battalion supported on the flank by a battalion of the 47th regiment.

Although, towards the end of the battle, the head of General Ducrot's column was able to join in the fight, still as the darkness came on, the French were repulsed and had to retire under cover of the guns of Fort Mont Valérien. These had been engaged with the Prussian artillery during the day in order to draw off the fire from the infantry. The 5th light battery of the Vth corps in action at Brézin suffered most; it was at this spot that the Crown Prince of Prussia took up a position during the battle. Towards evening our outposts occupied the same ground as in the morning.

In the attack on Montretout the French were more fortunate; the weak garrison of 60 men had to evacuate it and fight their way out. The enemy soon made a lodgment there, and brought guns into action on the right, so that it was not retaken till after dark. This was effected at 11 o'clock in the evening by detachments of the 47th, 58th, and 82nd regiments. It was observed in the afternoon and evening, that a large force of the French were bivouacking outside the fortress, and it was necessary, therefore, for the Prussians to make preparations to meet a renewal of the attack; consequently a Bavarian brigade of the 1st corps, which had arrived before Paris a few days previously from the southern army, and some guard landwehr were moved to Versailles.

Our loss was 39 officers and 616 men, that of the enemy was very considerable, it amounted to 7,000 men, of whom 1,000 were left dead on the battlefield. There was also a small fight this day on the eastern side of the investing line; a company of the 100th regiment together with one of the 101st surprised the enemy's outpost in the farm of Groslay and took 5 officers and 150 men prisoners.

On the 20th of January detachments of the 58th regiment and the 5th jäger battalion surrounded and captured 18 officers and 320 men in St. Cloud, to which place they had retired in the expectation that the battle would be renewed there.

Although the investing army was constantly engaged in its front by these repeated sorties, they did not remain unmolested in their rear, where franc-tireur bands, more or less organised, threatened the railways and telegraphs, and carried off transport, patrols, and officials; it became necessary therefore up to the last days of the siege to despatch large columns against them, and as late as the 27th of January a force consisting of 2 infantry and 2 cavalry regiments with 8 guns, marched from the southern post of the investing circle towards Auxerre.

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From the beginning of the investment the internal condition of Paris had been anxiously watched at headquarters, and the fall of the capital would have been a mere matter of time, as

the provisions decreased daily whilst the political difficulties increased.

The capitulation of Metz and the destruction of the newly-formed armies in the south and north, seemed to have no effect on the character of the defence; the negotiations for an armistice, which had been carried on in the first days of November between the headquarters at Versailles and the French Government, had been broken off after lasting for five days.

Under these circumstances, the necessity of a regular siege or bombardment of the capital had become inevitable, as the only means of bringing the war to a speedy conclusion; but the preparations were on such a large scale, that, as regards the principal attack on the south front, we shall have to treat them separately.

A large siege train had to be brought up for the attack, composed partly of guns from the home fortresses and partly from the trains which had been already employed against other French fortresses, but at the same time the sieges then in progress, which required a great amount of material, could not be interrupted. It was not surprising therefore, that exactly the most appropriate guns should not have been used in the artillery attack on the south front, or that the Germans were unprepared for the extraordinarily rapid wear of the guns, which influenced the progress of the siege.

The siege train contained about 300 pieces of ordnance, namely, 70 long 24-prs., 15 short 24-prs., 100 12-prs., 40 6-prs., exclusive of rifled breech-loaders, besides 20 25-pr. shell guns, 20 50-pr. mortars, and 6 rifled 21-cwt. mortars. Each gun was provided with 500 rounds for curved fire with the necessary side arms and stores; the carriages, platform wagons, gyna, &c. with all their gear had to be brought up.

The Ballon guns, of which there were twenty, and which were much spoken of at the time, were not guns but wall pieces, on a small four-wheeled wagon with a platform and spindle moved by means of a ball; they did not, however, succeed.

The parking of the siege guns for the south front occupied much time, as only one line of rail, that through Nancy, was available at first, and this could not even be used in its entire length most of the time, as several tunnels and bridges over the Marne, between La Ferté and Meaux, had been destroyed by the enemy and had to be repaired. All the other bridges on the line had to be carefully inspected and strengthened so that they should not break down under the immense loads; more than 100,000 cwt. of stores and ammunition alone had to be moved, which for the reasons given above had to be unloaded by hand and conveyed by road from Meaux and Lagny to the siege train park at Villa Coublay before Paris, a distance of 12 miles (56 English miles). Special roads had to be made for the transports, and bridges built over the Seine. Several thousand draught horses were required as the requisitioned teams were insufficient and the drivers were constantly deserting, sometimes

with and sometimes without their wagons, so that the necessary horses had to be provided from the troops; but this arrangement was not found convenient as a permanency. Twenty-four transport columns, each of 40 wagons, were therefore brought from Germany, and equipped partly with the French wagons and harness taken at Metz. The transport for the first establishment of the siege train occupied several weeks, both night and day, and had even to be continued in the same manner during the siege.

Two of the Strousberg traction engines were brought into use. The hilly nature of the country, the soft roads, and the slipperiness in frosty weather and snow caused the greatest difficulties to the numberless wagons. Although the guns, ammunition, and other stores were all safely conveyed to the artillery park, still it was necessary to have special escorts to protect them against the hostile population. These circumstances increased immensely the difficulties of preparing for the attack on the south front, for whilst, on the east and north fronts everything brought from Germany was delivered by rail close up to the parks, in the other case all the material had to be transferred to the wagons and carried from for four to five days by road before reaching its destination. No person without a knowledge of the extensive organisation required for a siege park can form any idea of the vast preparations, or the energy and foresight necessary to carry out such an undertaking. The establishment of the engineer park and depôts presented similar difficulties.

To the right rear of the gun park, were the store sheds, the empty shells and other projectiles, the laboratories, a fuze magazine, and six powder magazines, with their proper guardhouses, all screened from the enemy's view by a wood. The situation of Villa Coublay was very convenient for the purposes of the siege, but it required some additional security against hostile enterprise, and three field works were constructed on the plateau of Moulin de la Tour, of which the centre one was armed with 12, and the other two each with 6 rifled 12-pounders. The rocky chalk soil, frozen later to a depth of  $1\frac{1}{2}$  feet, made the construction of the batteries a work of great difficulty; the laying of the platforms had to be executed in the rock with crowbars and miners' tools. On the other hand the presence of the woods and the material they afforded were of great service in building the batteries. In consequence of being thus hidden they were not unmasked until the moment of opening fire; in one case an artificial screen was formed by planting trees and boughs, behind which the construction of the batteries proceeded quite unperceived by the enemy. Countless vehicles with the baulks and platforms (both of which had to be brought from Germany), fascines and gabions, which were made by the Vth and IIInd Bavarian corps, filled the roads and paths leading to the batteries for months, generally at night so as to be unobserved by the French. The production and accumulation of the different materials were, under the circumstances, works of uncommon difficulty; for, although the equipment provided the greater part

of the tools, still a considerable quantity had to be obtained by requisition or forwarded from Germany. All these preparations required much time, both on account of the variety of difficulties that had to be encountered, and the shortness of the days ; but until everything necessary for carrying out the siege thoroughly was in its place, the opening of the attack could not be thought of.

It is hardly necessary to add that the time and manner of carrying out the siege had already been decided by the authorities ; and if there was any delay in opening the attack, it was on account of circumstances which have been already been noticed, a detailed account of which would be beyond our province.

Paris was to be attacked on three sides simultaneously, so as to force the enemy to use his heavy guns on more than one front. It is worthy of remark, that the most broken ground had to be selected for the artillery attack, and that in order to reach the body of the place, several of the outer forts would have to be engaged first, and perhaps have to be captured.

A short account of the different attacks in the east, north, and south, under the direction of Major-General Prince Kraft of Hohenlohe-Ingelfingen, commander of the guard artillery brigade, will follow here, in the order in which they were carried out.

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#### I.—ARTILLERY ATTACK ON THE EAST FRONT.

The object of the French position on Mont Avron was, in conjunction with the forts in rear, to prepare sorties, and to support them with the fire of the guns ; it commanded the valley of the Marne and covered the assembly of troops there, as well as the passages over the Marne, and at the same time it flanked the greater part of our eastern line of investment. These favourable circumstances induced the enemy continually to strengthen this position, so that in the end there were six 30-pounders, six short 24-pounders, twenty-three 7-pounders, thirty-four 12-pounders, seven mitrailleuses, altogether 76 guns distributed in eight batteries ; the latter, however, were imperfectly constructed, and unprovided with bombproofs and traverses, on account of the difficulty of working in the frozen ground. The commandant on the plateau of Mont Avron was the well-known and able Colonel Stoffel, who before the war had been attaché to the French embassy in Berlin. There was no intention on the German side of occupying Mont Avron, especially as it lay under the cross-fire of Forts Rosny, Nogent, and Noisy, and of the redoubts Montreuil, La Boissière, and Fontenay, situated in the intervals. Our positions were so close that our heavy guns could engage Mont Avron as well as the forts lying behind it.

The following batteries were constructed :—

*A.—On the Plateau of Raincy.*

Batteries Nos. 1, 2, 3, and 4, armed respectively with six 24-pounders, six 12-pounders, six short 24-pounders, and four short 24-pounders, altogether 22 guns, directed chiefly against Mont Avron, Fort Rosny, and other less important places, such as the villages of Avron, Rosny, Villemomble, and the redoubts of la Boissière and Montreuil.

*B.—On the Plateau of Mont Fermeil on the side nearest to Gagny.*

Batteries Nos. 5,\* 6, 7, and 8, armed respectively with six 12-pounders, six long 24-pounders, six 12-pounders, and six 12-pounders, total 24 guns, to fire over the same ground as the other batteries, and also to sweep the valley of the Marne. To destroy any bridges that might be thrown over the river and prevent a passage.

*C.—In position between Noisy and Gournay.*

Batteries Nos. 9 and 10, armed respectively with six 12-pounders and six long 24-pounders, together 12 guns. To fire on the Marne valley and the valley of Villemomble and prevent the assembly of troops in these localities.

*D.—In position south-west of Noisy-le-Grand.*

Batteries Nos. 11, 12, and 13, each armed with six long 24-pounders, making a total of 18 guns to sweep the sides of Mont Avron, the villages of Villemomble and Neuilly, the railway junction, the Fontenay redoubt, and Fort Nogent.

The distances of the different batteries from Mont Avron varied from 3,500 to 6,000 paces.

The park of artillery was established at Brou, half a league to the east of Chelles, to which were brought 36 rifled 12-pounders, 30 rifled 24-pounders, 10 rifled short 24-pounders, altogether 76 siege guns.

A transport column of 700 wagons was cantoned there in improvised barracks and stables. Ten companies of garrison artillery were available. The whole was placed under the command of Colonel Bartsch as chief of the siege artillery, while Colonel Oppermann superintended the works of the engineers.

On the 13th of December the construction of the batteries was begun; it had to be carried on almost entirely at night, with the exception of the batteries on the plateau of Raincy, which were screened by the woods.

Trench communications were made, where necessary, between the batteries, covered by traverses; roads and bridges were constructed, as well as bombproofs of all descriptions.

Fire was opened on the morning of the 27th of December at half-past 7 o'clock from 76 guns, and it succeeded by the next

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\* In the plate No. 5 Battery is shown on the plateau of Raincy.



day in silencing Mont Avron after a good resistance, and considerable loss among the gun detachments; only the works in rear continued to respond to the fire, and the German artillery succeeded in driving the French garrison out of Bondy and out of the railway station at Noisy le Sec.

The French evacuated the position on Mont Avron on the night of the 28th-29th of December. They had thrown a garrison into it on the previous night, of two divisions under the command of General d'Hugues, with the intention of occupying it defensively. Their withdrawal during the night, together with the removal of the artillery matériel, took place under the eyes of General Trochu, who had hurried to the spot, and was performed in wonderfully good order, covered by the marines and three field batteries. On the 30th of December Mont Avron was occupied by Saxon detachments. Supported by a covering party they levelled the enemy's works and destroyed the ammunition and other matériel found there; the magazine had been prepared for demolition. The next thing was to drive the French out of the villages of Drancy and Bobigny, which they held in force, and for this purpose emplacements Nos. 14 and 15 were constructed. Two other batteries, Nos. 16 and 17, were built at Chennevières to command the plateau of Villiers. To oppose the French position of Courneuve, Le Bourget, and Drancy, No. 1 battery at Blanc-Mesnil, and Nos. 2 and 3 batteries \* at Pont Iblon were constructed, and armed altogether with 18 guns, so as to render an offensive movement from that direction impossible. Some of these latter batteries were advanced afterwards as far as Le Bourget, and were thus in a position to co-operate against St. Denis in the attack on the north front.

On the 2nd and 3rd of January a heavy fire from the siege batteries was continued against the whole of the east front, and was only replied to feebly from Fort Nogent.

As the east front had always been considered the strongest of the Paris defences, our successes against Mont Avron had raised a great alarm in the city, and ignorance of the military circumstances had caused an unreasonable despondency, as well as distrust in their military chief. Meanwhile the enemy remained in possession of the villages of Bondy, Bobigny, Drancy, and Rosny, and disturbed our outposts from those places by frequent alarms; thus, on the nights of the 10th and 15th of January the Saxon outposts were attacked on the railway in advance of Aulnay and at Nonneville, whilst the same thing happened to the Guards in Le Bourget three times during the night of the 14th of January. On account of these offensive movements, the siege batteries bombarded those places for 48 hours on the 16th of January, the results of which could only be ascertained by a reconnaissance of detachments of the 2nd division of foot

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\* These three batteries formed at the same time the left wing of the attack on the north front.

guards against Drancy, and of the 23rd infantry division against Groslay farm, on which occasion 5 officers and 130 men were taken prisoners.

On the night of the 26th-27th of January the batteries of the attack ceased firing.

## II.—ARTILLERY ATTACK AGAINST THE SOUTH FRONT.

The command here was entrusted to Colonel von Rieff, President of the committee on artillery experiments. This officer had arrived before Paris towards the end of September; the special reconnaissances, and all arrangements for the preparation and execution of the attack had been carried out under his orders. There were at his disposal 30 companies of garrison artillery, with their staff, and a numerous body belonging to the store department for duty in the various parks and dépôts.

The following batteries were constructed:—

### A.—*Left Wing.*

Battery No. 1 (St. Cloud) for six 12-pounders.

Battery No. 2 (Meudon) for eight 12-pounders.

Both these batteries to act against Billancourt, the Bois de Boulogne, and the islands in the Seine.

Battery No. 3 (Meudon) six 24-pounders.

Battery No. 4 (Meudon) six 24-pounders.

These batteries to counter-batter and enfilade the south and west fronts of Fort Issy.

Dismounting battery No. 16 (Meudon) four 12-pounders, to fire against the gun emplacements at Fort Issy.

Dismounting and breaching battery No. 19 (Fleury and Clamart) armed with four long and four short 24-pounders, against the south front of Fort Issy, the long 24-pounders against the Paris enceinte.

Dismounting battery No. 20 (Clamart) for six long 24-pounders, to fire against the south front and the north-west bastion of Fort Vanvres.

### B.—*Centre.*

Enfilade and dismounting battery No. 5 (Clamart), six 24-pounders, against the south-west curtain and the south bastion of Fort Issy.

Enfilade battery No. 6 (Clamart), six 24-pounders, against the south-east front of Fort Vanvres.

Enfilade and dismounting battery No. 7 (Moulin de la Tour) for six 24-pounders, against the south front and the south-west bastion of Fort Issy.

Dismounting battery No. 17 (Moulin de la Tour) for six 12-pounders, against the emplacements between Forts Issy and Vanvres.

Dismounting and breaching battery No. 8 (Moulin de la Tour) for six 24-pounders, against the south front of Fort Vanvres.

Enfilade and dismounting battery No. 9 (Moulin de la Tour) for eight 12-pounders, to fire on the west front of Vanvres and its south-west bastion.

Enfilade and breaching battery No. 10 (Moulin de la Tour) for six 24-pounders, against the south and west front of Fort Vanvres.

Dismounting battery No. 21 (Chatillon) six short 24-pounders, directed against the south-west front of Vanvres, and the neighbouring gun emplacements.

#### *C.—Right Wing.*

Enfilade and dismounting battery No. 11 (Fontenoy) with eight 12-pounders, to fire on the west front of Fort Montrouge.

Enfilade and dismounting battery No. 12 (Fontenoy) eight 24-pounders, also to fire against the west front of Fort Montrouge.

Dismounting battery No. 18 (Chatillon) for six 24-pounders, to fire against Fort Montrouge, the emplacements to the west of it, and the city.

Dismounting and enfilade battery No. 22 (Chatillon) for six 12-pounders, with the same object as No. 18.

#### *D.—Batteries for vertical Fire.*

Mortar battery No. 13 for two rifled mortars at the Tour des Anglais, to fire against Fort Issy.

Mortar battery No. 14, armed like No. 13, to fire against Fort Vanvres.

Mortar battery No. 15, armed like No. 13, against Fort Montrouge.

Mortar battery No. 23 for four 50-pounder mortars against Fort Issy.

Mortar battery No. 24, armed like No. 23, against Fort Vanvres.

In order to secure the right flank of the artillery attack, against which the French made particular exertions, especially from Villejuif, and to occupy the enemy's batteries there continuously, a flank attack was organised on the line La Rue-Chevilly, under command of General von Ramm, to be carried on independently. The park attached to it was at Rungis, and two batteries, each for six 12-pounders, were at first built in the given line, but afterwards advanced somewhat nearer to Villejuif.

The original armament of some of the batteries was changed in the course of the siege operations to meet the alterations in the range; the greatest distance was 4,000 paces, and the smallest 1,700 paces; during the last days of the bombardment, the interior of the city was the object of attack of nearly all the batteries, some of which sent their projectiles to a distance of 12,000 paces.

The garrisons of Forts Issy, Vanvres, and Montrouge observed the ground in their front, by means of outposts and piquets, patrols from which had frequent small collisions with ours; thus on the 16th December 1870, two companies advancing from Fort Issy attempted to occupy the village of Meudon, but were repulsed by the Prussian outposts, leaving five wounded behind them.

With the object of gaining some ground on our side, the French outposts were driven out of Bas Meudon, Le Moulineaux, and Fleury shortly after midnight on the 3rd January; strong reserves had been brought up for the occasion. During the same night, the arming of the German batteries was completed; but the opening of the fire on the 4th January had to be postponed on account of the fog. In order to take off the attention of the enemy from the attack on the south front, the XIIth corps received orders to make demonstrations on the east side. In accordance with these, on the 4th January, the 24th division undertook a reconnaissance from Chelles against Fort Nogent, whilst at the same time, the demolitions on Mont Avron were carried on with great activity, to create the impression on the enemy that German batteries were to be established there. Two battalions of the 101st regiment, and a light battery advanced against Neuilly sur Marne, and occupied a part of the village and evacuated it again during the night; as a consequence of this, the enemy increased his force in the front, and remained under arms till morning.

On the 5th of January there were more demonstrations, principally against the villages of Nogent and Rosny. The 2nd battalion of the 105th regiment and the 3rd battalion of the 106th regiment, accompanied by a light battery, were directed against Nogent, whilst the enemy's outposts were threatened from Mont Avron, and the 3rd battalion of the 101st regiment was sent against the garrison of Bondy. Other movements of troops also occurred in this district. The Saxon detachments retired from all points to their original position, after accomplishing the tasks with which they had been charged, whilst the French maintained an extremely heavy fire from 31 guns against the German artillery position on the plateau of Raincy. From the 31st of December until the 5th of January the artillery of the defence on the east front remained almost silent.

During these occurrences on the east front, the arming of the German batteries on the south front had been completed without molestation; on the 5th of January, towards morning, the French made several small sorties against the outposts on the hill of Clamart. The latter had occupied the summit of the hill, and were attacked during the previous night, three times in succession, on the last occasion with one battalion, which, however, retired when the bombardment opened. The 80th regiment also repulsed a sortie made against Meudon.

On the 5th of January, as soon as the fog permitted a good view of the enemy's position, the batteries opened their fire,

which had been ordered to commence at half-past 8 o'clock. The principal attack fired this day on Forts Issy, Vanvres, and Montrouge, from batteries No. 1 to 17; the collateral attack directed its fire against the entrenchments at Villejuif and the gunboats that appeared on the Seine.

For the sake of brevity, we cannot give all the details of the artillery fight which had now commenced; it is sufficient to remark that everywhere the French artillery, but particularly from the main enceinte, and from the batteries at the Point du Jour, showed the greatest activity, and proved itself to be an opponent worthy of our respect, forcing us often enough to give up the tasks originally assigned to single batteries, in order to meet him with united strength.

January 6th.—Clear weather; the fire from Fort Issy was temporarily silenced. The enemy fired into St. Cloud, Bougival, and Vaucresson from Fort Mont Valérien, and unmasked four new batteries at the Point du Jour; the guns on both sides of the aqueduct engaged No. 1 battery and fired on to the plateau of Meudon; Forts Issy and Vanvres only fired slowly; on the other hand Fort Montrouge directed a heavy fire against the redoubt of Moulin de la Tour, which was occupied by the Bavarians, as well as against the village of Clamart. Our fire was chiefly against Fort Issy and beyond that towards Paris, against the Point du Jour, and the adjoining batteries on the railway embankment and the aqueduct. In the neighbourhood of Point du Jour the flames broke out in several places.

January 7th and 8th.—Thick weather; the firing was continued and set the barracks in Forts Vanvres and Montrouge in flames; our projectiles ranged from 9,000 to 9,500 paces up to the gardens of the Luxembourg Palace. The revetments and buildings inside Fort Issy were being demolished; the fort answering the fire but feebly. From Fort Vanvres there was only a dropping fire. Montrouge was engaged with the Bavarian batteries at Moulin de la Tour; a barrack in the fort was set on fire. Against the Point du Jour and the adjoining batteries the artillery fight continued. Some of the batteries were silenced, but the well-conducted defence and extended front of the fortress enabled them soon to be replaced.

The authority of the Governor, General Trochu, over the Parisian populace was beginning to be shaken; he yielded to the pressure put on him and allowed himself to be hampered by a council of eight members; in a proclamation issued he repudiated the idea of a capitulation.

January 9th.—The object of our fire now was to prevent the enemy from constructing new earthworks for gun emplacements, communications, &c.; the reply to it from his positions was less energetic; it seemed as if the enemy were engaged in withdrawing the heavy calibres from the advanced positions. As the day was foggy, with continuous driving snow, the batteries of attack were ordered to slacken their fire. The government of Paris made a protest against the bombardment of the city, which,

considering that the siege had now been in progress for three months and a half, and that in the conduct of the defence neither towns, villages, nor palaces on their own soil had been spared, was naturally rejected; on the 8th-9th of January some of the batteries received orders to bombard the inner portions of the town. At half-past 8 in the evening, Le Val was attacked by the 10th company of the 87th regiment, and a subdivision of the 11th company of the same regiment was sent against Moulineaux, as the enemy had located himself again in these places; after a good resistance he was driven out, and the besiegers by the capture of these places were enabled to approach from 1,500 to 1,600 paces nearer to Fort Issy.

January 10th.—At 3 o'clock in the morning, some chasseurs managed to penetrate into a new battery on the hill of Clamart, which only opened fire on this day, but the covering party drove them out again. This spot was of the utmost importance both for the attack, and the defence, and for weeks the ground had been disputed by the outposts. Similar small affairs occurred at other places, evidently with the intention of making our approach more difficult. Our fire, which was continued without intermission, was answered by the enemy, but only to a limited extent. Paris was burning in several places. The battery at St. Cloud fired into Billancourt and the Bois de Boulogne.

On the 11th of January, a heavy fire was maintained against the enemy's works and gun emplacements. The barracks in Fort Issy were set in flames, as well as several houses in the suburbs of Gentilly and Vaugirard, and in the north-east part of the city; German projectiles ranged as far as the church of St. Sulpice, a distance of 10,000 paces; in the more exposed streets of Paris, the stone paving was torn up. The enemy made a skilful use of the entrenchments in front of, between, and in rear of the forts connecting the gun emplacements, to construct new batteries and change the position of the guns. The garrison of Fort Mont Valérien undertook a reconnaissance against our outposts at St. Germain, but were soon compelled to retreat.

January 12th.—The fog, which had been continuous, for the last two days, still interfered with our fire. The enemy replied to it vigorously from the main enceinte. Covered by the fog, the garrison of Montrouge managed to mount some fresh guns. The besiegers threw their projectiles far into the town beyond the Luxembourg Palace, but the storming of the south forts, which at one time was considered a necessity by some of the authorities, was abandoned. In view of the original intention, a parallel had been constructed between Clamart and Chatillon at a distance of 1,500 paces from Forts Issy and Vanvres; which would have formed the basis of a regular attack against those forts.

A decree published by the provisional government secured to citizens wounded by the enemy's shells, the same claim to pension as the military.

January 13th.—On account of the continued fog the fire on both sides was slack. During the previous night a vigorous

sortie of the French, by a force of about 4,000 mobiles stationed in and behind the forts, was repulsed by detachments of the XIth corps at Meudon and by the IIInd Bavarian corps at Clamart.

January 14th.—The fire from the besiegers' batteries was continued; the three forts of Issy, Vanvres, and Montrouge had almost ceased to fire, but the latter made an attempt to reply with field guns when there was a favourable opportunity.

January 15th.—After great labour and exertion battery No. 1 (St. Cloud) managed to silence the French batteries established at the Point du Jour in the south bastion, and was enabled now to continue its fire against the three batteries in the north bastion and the town. Prussian projectiles were thrown as far as the church of Notre Dame and the Jardin des Plantes. The dissatisfaction and ferment increased to such an extent in the town, that General Trochu had publicly to contradict the report that several generals had been committed for treachery.

January 16th.—Battery No. 21 opened fire to-day to demolish the casemates in Fort Issy.

January 17th and 18th.—The enemy showed great energy in re-arming along his front and in the unexpected unmasking of guns, which had been mounted in emplacements within the entrenchments.

Then occurred that momentous event in the history of the world when King William, within sound of the thunder of the siege batteries, accepted for himself and his descendants the title of Emperor, offered him by the German princes and free towns, with the vow to uphold, in German faith, the rights of the empire and its members, to preserve peace, and by the help of his people to maintain the independence of Germany, as had been done gloriously by Prussia's kings for 170 years. This ceremony took place on the 18th of January 1871 in the Hall of Mirrors at Versailles, in the presence of the German princes and surrounded by representatives of the German Army.

January 19th.—Notwithstanding the sortie from Fort Mont Valérien against the heights of Garches, the guns on both sides kept up an uninterrupted fire.

January 20th.—There was a slackening of the fire from the artillery of the defence, probably in consequence of the failure of the sortie of the previous day; thus, the fire from Montrouge, where the guns had been admirably fought, almost ceased towards mid-day; in the batteries at the Point du Jour the fire ceased altogether for a time; the eastern barracks in Fort Vanvres were set in flames. General Trochu sent General Count d'Herison to the commander of the 3rd army to demand an armistice of 48 hours, which, however, was only conceded on the line from St. Cloud to Garches for a sufficient time to bury the dead.

January 21st and 22nd.—Heavy fire from the batteries adjoining the Point du Jour and the emplacements between the three south forts; among the latter a French redoubt constructed

in the interval between Forts Vanvres and Montrouge distinguished itself particularly; it required nearly a whole day for our batteries to master it. A powder magazine in rear of Clamart was blown up. Insurrectionary movements of the Parisian populace were observed.

January 23rd.—Lively fire from the enceinte of the city; fresh batteries were unmasked by the French at the entrance to the Bois de Boulogne. The artillery of the attack did not allow itself be troubled by this, but managed to silence several batteries of the main enceinte, and subdue the fire of the field battery which had been so active on the previous day.

January 24th.—The fire of the besiegers' batteries could only be continued at intervals on account of the fog, the enemy replying but feebly. A serious outbreak occurred in Paris in which the prison of Mazas was stormed, the prisoners liberated, and the granaries with supplies of bread and wine plundered by the mob; in front of the Hôtel de Ville the national guard fired on the insurgents.

January 25th.—The enemy attempted, under cover of the fog, to construct earthworks in and round Fort Issy, but were prevented. The bombardment continued as on the previous days.

January 26th.—Clear weather; the bombardment was only weakly answered from the enceinte of the city, from Fort Montrouge and from the emplacements between Forts Vanvres and Issy; notwithstanding the weather being clear the artillery of the defence were unable to accomplish anything. Equally futile was the heavy fire from the battery at the Point du Jour against No. 1 battery. The batteries in front of Clamart were fired at but slightly from the fortifications of the town and from Fort Montrouge, and the neighbouring mortar batteries scarcely at all.

January 27th.—After midnight the batteries on both sides ceased firing by common consent.

The losses of the German artillery in the 22 days' bombardment were 12 officers and 200 men killed and wounded; the field hospitals were established at Malabry and Sceaux, the chief hospital at Igny, between Versailles and Palaiseau. Lieutenant-General von Kamecke, who had been in command of the 14th Division during the campaign, was ordered from Mezières to Paris to take over the chief command of the engineering works of the attack. The works which had been carried out by the engineers during the artillery bombardment were, covered communications between the batteries, shelter trenches, traverses, assistance in building batteries and powder magazines, shell stores, posts of observation, underground storerooms (all bombproof), rendering the barracks which were not bombproof secure as guard houses, preparation of defences, constructing and maintaining roads, &c. Although the trenches were filled in some places with water which increased the difficulties of using them, it was an evil which could only be partially remedied; it



must always occur at a siege carried on during the winter, as the trenches follow the lie of the ground and become the natural points of accumulation for the surface and subsoil drainage.

### III.—ARTILLERY ATTACK AGAINST THE NORTH FRONT (ST. DENIS).

The intricate works of St. Denis are among the strongest of the defences of Paris, but they have one defect, that they have not a sufficient command to be defiladed from the hills in front, consequently they can be seen into, and in some places even the works of the gorge can be fired at.

On the 21st of December, there was a sortie at Epinay-le St. Denis against the troops holding the investing line at that place; the gun-boats on the Seine co-operated, but eventually it was successfully repulsed by Prussian batteries of position at Orgemont and Enghien.

As long as Mont Avron continued in possession of the French, it was impossible for the German batteries on the north-east front to approach nearer, because the German position on that side of Paris as well as the strong French position La Courneuve, Le Bourget, and Drancy, was brought under an effective flanking fire. The capture of Mont Avron, which was of the utmost importance, as well as the unsuccessful sortie of the French against Le Bourget on the 21st December, must have proved to the enemy that any attacks against the position of the Guards there could lead to no result. In consequence of these occurrences the French defence at that point lost its energy, and the fire of the Prussian batteries was therefore turned against the villages of Drancy, Bobigny, Bondy, and Rosny, with good effect; the forts of Noisy and Rosny were only fired at occasionally. In the meantime, a number of other German batteries were built on the line Livry-Garches, with the intention of making a frontal attack against the French position of La Courneuve-Drancy. Two batteries at Garches were directed at the same time to enfilade the works of St. Denis.

For the actual bombardment of St. Denis, on the capture of which great value was very properly set at head-quarters, it was necessary, exclusive of the 24 6-pounder field-guns, to organise a special siege train, made up from the guns which had been employed at Mezières and Péronne; namely,

26 long 24-pounders, 10 short 24-pounders, 32 12-pounders, and 3 rifled mortars.

The necessary preparations for the attack on St. Denis began on the 10th of January; the siege train park was established at the railway station of Gonesse, a new transport park for 700 wagons was prepared at Ecouen, and a sufficient matériel, which was already partially prepared, for the construction of the batteries, was collected in dépôts at Arnouville and Montmorency. In order not to postpone the building of the batteries until after

the arrival of the siege artillery companies from Mezières, the emplacements were constructed, by men from the field artillery and by the pioneers of the guard and 4th corps. The following 15 batteries were made :—

Batteries Nos. 1, 2, and 3, armed each with six long 24-pounders, and six 12-pounders to fire against Drancy, Bobigny, and La Courneuve.

Battery No. 4, armed with eight long 24-pounders, against Fort Aubervilliers and the suburb of La Vilette.

Batteries Nos. 5, 6, 7, 8, and 9, armed respectively with six long 24-pounders, six short 24-pounders, eight 12-pounders, and three rifled mortars against the fort and village of Aubervilliers, Fort de l'Est, Double Couronne, Fort de la Briche, and St. Denis.

Batteries Nos. 10 and 11, each armed with six long 24-pounders and eight 12-pounders, against the fortifications of St. Denis and the Seine.

Battery No. 12, armed with six long 24-pounders to fire at the same objects.

Batteries Nos. 13, 14, and 15, armed with eight 12-pounders, four short, and six long 24-pounders, against Forts de la Briche, Double Couronne, and the whole fortress of St. Denis.

All these batteries opened fire on the 21st of January.

A glance at the map is sufficient to show that the besiegers' batteries had the advantage of a concentric fire against St. Denis, the collateral forts, and the French positions generally. As early as the 22nd of January, the fire from St. Denis was almost silenced. The town was in flames in several places. The repulse of the sortie on the 19th of January, and the effect of the bombardment against the whole circle of the Paris fortifications, with the exception of Mont Valérien, had produced the greatest discord and dissatisfaction among the populace of the capital. Serious risings occurred among the people, which led, on the 23rd of January, to a severance of the functions of President of committee of national defence from those of Commander-in-Chief of the army. General Vinoy was appointed to the chief command of the army of Paris, whilst General Trochu continued to be a member of the Government only.

In the meantime, on the 25th and 26th of January, the bombardment of the north front went on without interruption until the night of the 26th-27th of January, when the fire on both sides ceased here also.

On the evening of the 28th of January an armistice of three days was declared, for the negotiation of which Jules Favre, the minister of foreign affairs for the Paris Government, had during the last few days visited Versailles, and been backwards and forwards between that place and Paris. The conditions with regard to Paris were settled with a military commission which arrived from the capital. They were as follows :

All forts to be at once given up; the main enceinte to be disarmed. The troops of the line, marines and guards mobiles to become

prisoners of war, with the exception of 12,000 men for the preservation of order in the city. The prisoners to remain within the gates of the city during the armistice and to hand over their arms; the garde nationale and the gendarmerie to retain their arms. All franc-tireur corps to be disbanded. The Germans to assist the French commissaries as far as possible in the reprovisioning of Paris. Persons desirous of quitting Paris to obtain a permit from the French authorities, with a German visa. The municipality of Paris to pay a contribution for the town of 200 million francs within 14 days. Public property not to be removed during the armistice.

In accordance with the above stipulations, on the 29th of January, at 11 o'clock in the morning, all the forts, with the exception of Vincennes, were, after a previous reconnaissance for mines, &c., occupied by the besieging army; Mont Valérien and Fort Issy by the Vth Prussian corps, Forts Vanvres and Montrouge by the Bavarian corps, Fort Charenton by the 1st Bavarian corps, Forts Ivry and Bicêtre by the VIth Prussian corps, the redoubts Gravelle and Faisanderie by the Würtemberg division, Forts Nogent, Rosny, Noisy, and Romainville by the XIIth Saxon corps, Fort d'Aubervilliers by the guard corps, and the works of St. Denis by the guard and IVth corps. At the same time the outposts were brought within from 500 to 700 paces of the enceinte of the town, and the main positions advanced in a corresponding degree. In all the forts occupied by the Germans the necessary works were commenced that might be required if the bombardment had to be continued at the reduced range. In the intervals between the south forts, and other suitable positions, six new batteries were erected besides emplacements, which were armed with the necessary guns and prepared for opening fire.

The execution of the convention with Paris, and the disarmament, was carried out without interruption; though the delivery of a large portion of the arms did not take place on account of the angry feeling of the inhabitants, and for other reasons. However, near 200,000 Chassepôt rifles, 600 field guns, and 1,350 garrison guns fell into the hands of the victors. The total loss of the Paris army during the siege is given as 17,000 killed.

On the 1st of March 10,000 men from each of the VIth and XIth Prussian corps, and the IInd Bavarian corps, marched into the Bois de Boulogne, where they were to remain two days for a review which the Emperor King was to hold in the Champs Elysées and the adjoining part of the town.

Lieutenant-General Kamecke acted as commandant of that part of Paris which was occupied by the German troops. The latter were to be relieved on the 3rd of March by a body of equal strength from the guard corps, the siege artillery, and pioneers, and the King's grenadiers, which had been specially recalled from Orleans for the purpose.

This, however, never took place, as the ratification of the preliminaries of peace by which the town was to be evacuated at

once arrived from Bordeaux on the day before. His Majesty nevertheless, held a review on Longchamps, and on the same day our troops marched out of Paris.

The German armies now retired behind the line of the Seine; those troops which were prevented by the circumstances mentioned above from passing in review before His Majesty in Paris, namely, the Xth Saxon corps, the 1st Bavarians, and the Würtemberg division, were inspected by the King at Villiers.

This brings to a close the description which we have given in broad outline of the glorious siege of Paris, which was carried on during four months and a half with an expenditure of men and material on both sides, quite without parallel in the history of war; no other siege can be compared with it either for military importance or political consequences.

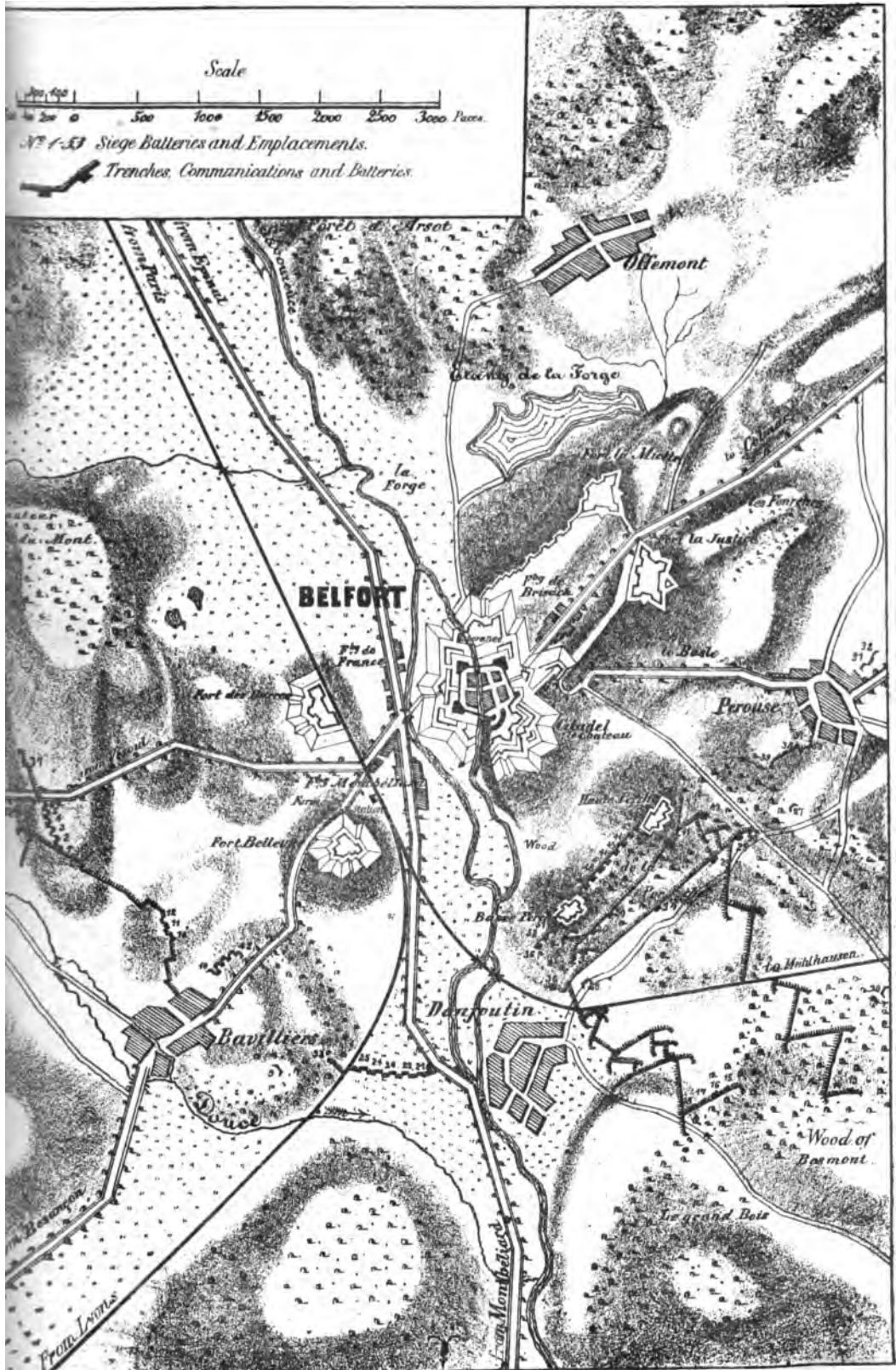
## BELFORT.

(PLATE XIX.)

This fortress, in the valley of the Sund, lies at the junction of three railroads, which lead on the east, *viâ* Altkirch and Mühlhausen to Basle, on the west *viâ* Vesoul to Paris, and on the south-west into the valley of the Doubs to Besançon; it is the point of junction of the roads from Epinal, Mühlhausen, Basle, Besançon, and Vesoul. This important position gives the fortress its military value, which is increased with regard to operations against Germany, by the pass leading between the Jura and the Vosges, called the Trouée of Belfort, which is always passable and not liable to snow drifts like most of the defiles in the latter range. The possession of the fortress became of the greatest importance to Germany after the conquest of Alsace and the fortified towns there, and all the more so, as experience showed that the population of this district, everywhere hostile to the invaders, found a point of support in Belfort; besides which it was to our interest once and for all to capture the gate by which French armies might debouch into South Germany.

Belfort, with 14,000 inhabitants, lies on the left bank of the Savoureuse, a tributary of the Doubs, an arm of which flows through the town, where the banks are lined with iron foundries. The Savoureuse forms on the north and north-east of the fortress a tolerably broad valley with meadows; on the west, the slopes of the Haute du Mont and of La Côte, form a belt of undulating ground about 1,500 paces in width; on the south side, there are more meadow lands, and on the east, several long ridges, of great importance to the fortress, as well as some isolated groups of hills and ranges of heights, among them the Perches, approach within the rayon of the fortress.

The ground plan of the fortress consists of a fortified pentagon built chiefly on Vauban's 3rd system. The north and west fronts have three bastioned towers with detached bastions in advance; the latter front is strengthened by a ravelin with retired flanks, and both are thoroughly flanked by the casemates in the towers. In advance of the north front lies the crown-work of l'Esperance, through which flows the Savoureuse, dividing the fort into two halves, the upper and lower; here is the sluice-gate of the Savoureuse, by means of which an inunda-





tion can be formed. At the eastern end of this work lies a bombproof barrack, another is situated on the arm of the Savoureuse, to which allusion has already been made; on the left wing is a casemated battery. On the south-east side of the town lies the citadel, commanding the former; it was originally planned by Marshal Vauban, and is situated on a steep rock rising to a height of 80 feet above the level of the streets. This fortification consists of a triple line; namely, a bastioned front with two bombproof barracks lying one behind the other, a counter-guard, and the outer works, which are of the nature of a crownwork. Both the last-named lines of fortification are provided partly with casemated, partly with open flanking defences, so that the works of the citadel taken as a whole may be considered very formidable and capable of good resistance. Whilst the cliffs on the south-west command the ground lying to the south of the fortress, and form a natural termination to the fortifications there, the defences of the chateau on the north-east are connected, by a separate work having an advanced ravelin, with Fort l'Esperance; from which the south-eastern slope of the long ridge is swept, and on the extreme end of it is the Fort La Justice. The latter is an independent fort, the garrison of which can be accommodated in a bombproof redoubt and in casemates. The work is connected by a curtain with Fort la Miotte. We wish to call particular attention to the lines of these two important outworks, which were planned by the late celebrated inspector-general of the French engineers, General Haxo, because they rendered the construction of the besiegers' parallels and batteries against them a labour of great difficulty, almost of impossibility. An entrenched camp for 10,000 men lies between the horn work l'Esperance, the work advanced on the north-east of the chateau, and the forts of La Justice and La Miotte. The steep slopes of the long ridge form the eastern side, whilst the opposite one is enclosed by an earthwork; in the interior lies the suburb of Brisach.

Fort des Barres, which has a front of nearly 1,200 paces, is a new and spacious work lying on the right bank of the Savoureuse; and covering the railway leading to Vesoul and Paris. The three bastions have casemates en décharge; in the centre one is a powder magazine; the gorge is closed by a loopholed wall.

Notwithstanding the skill with which the works covered the ground in front, still, at the outbreak of the war, there was a gap in the defences, 2,000 paces south-east of the town, where the ridge, called Perches, commanded the citadel, &c. Before the introduction of rifled long-range guns, it may have been of no consequence to the fortress, all the less so, because an attack on that side would have been under an effective flanking fire from Forts La Justice and La Miotte; now, however, the commandant recognised the necessity of crowning these heights with two works of a strong profile, though constructed hastily. The two forts of Haute Perche and Basse Perche have each a front of



from 350 to 400 paces, provided with two large and roomy blockhouses in the gorge, the ditches being blasted out of the solid rock with perpendicular sides, 9 feet deep; the ground plan has the form of a redoubt with a very broken crest line; on either side of the gorge were shelter trenches. The Fort Basse Perche is situated on the same level as the citadel; Haute Perche on the contrary lies 30 feet higher, so that it commands the citadel, and may be considered the key of the fortress.

Another work, Fort Bellevue, which had also been constructed hastily, lay near the railway station, and covered the suburb of Montbeliard; it likewise had the form of a redoubt, with a very indented crest line. Close to the fort is a farm, which had been fortified, and was brought into the general line of defence.

Belfort was one of those fortresses which immediately on the outbreak of the war was to have been placed in a state of defence, and the experienced commandant Colonel Denfert, who belonged to the engineer corps, endeavoured to accomplish this thoroughly with all the means at his disposal. For a long time the communication with the south, which remained untouched by the war, was open to him; and from this side he was enabled to complete the provisioning, as well as to provide all other matériel for the defence, so that the place had been strengthened and armed with the greatest care. By this means all building was much facilitated, and was executed with praiseworthy thoroughness and foresight. Guns of heavy calibre, with considerable supplies of ammunition were brought from the great arsenals of Lyons and Toulon.

None of the French fortresses that fell into our hands during the course of the war, except Metz and Paris, had detached forts, in consequence of which, and also because the besieging artillery were enabled to occupy advantageous positions at close range, their capture occupied only a short time. At Belfort the case was quite different, for here there were not only very strong well-placed detached forts, which kept the besiegers at a distance, but there were extremely few places from whence a successful artillery attack could be carried out. The season and the nature of the ground were also peculiarly unfavourable to the attack. In addition to this was the military capability of the energetic commandant, and to him must be given the credit of having by military training and discipline turned the heterogeneous garrison, confided to his charge, into opponents worthy of our respect. But most prominent of all was the skill with which he defended the ground in front of the works. The following description of the siege will show that he only retired into the fortress proper, during the last days of the defence, after the advance of the enemy had been impeded considerably by the use of suitable field works outside the fortress, which had been defended step by step.

The 1st reserve division, under Major-General von Tresckow II., received the order in the end of October 1870 to invest Belfort. These troops were distributed at the time throughout Alsace and

in the Vosges, and the march was, therefore, commenced with only 11 battalions, 7 squadrons, and 4 batteries, inclusive of the reinforcements from the 4th reserve division. The march was accomplished by the 2nd of November, after constant fights with the franc-tireurs and gardes mobiles. On the 3rd of November, the investment was completed; the line occupied by the outposts being  $5\frac{1}{2}$  miles (24.6 English miles) in length. With an infantry force of only 8,000 men, against a garrison of double that strength, who were active opponents, and on such unfavourable ground, where the view was intercepted by woods and hills, this was no easy task; numerous bands of franc-tireurs were in the rear, and from Vesoul to Colmar there were no German troops. Various reports about the presence of Garibaldi's partisan corps on the other side of the Doubs necessitated great caution. At the same time, the communication between the different detachments was interrupted by high wooded hills, without roads, in the possession of the enemy's outposts, which were pushed far to the front. Without loss of time the strong castle of Montbéliard, lying about three miles (14 English miles) to the south of Belfort, was occupied. It lies on the Rhine-Rhone canal, and is at the junction of the Allaine, Savoureuse, and Lisaine; it was placed in a good state of defence, and provisioned for three weeks. The roads that had been broken up were repaired, and the neighbourhood cleared of franc-tireurs. The patrols having reported that Dampierre to the south-west of Montbéliard was occupied by the enemy, General von Tresckow II. advanced on the 11th November by both banks of the Doubs to Clerval, pushing the enemy in front of him, who in retiring blew up the bridges and destroyed the communication.

In front of Belfort there were daily small collisions with the enemy's advanced outposts, who were gradually driven back on the fortress. In the meantime, Forts Miotte, Justice, and the two Perches, having a high command and extended view over the ground in this direction, kept up a heavy fire on the wretched villages that were used as cantonments, so that these were completely destroyed.

After the fall of Breisach, the division received the order to open the siege; General von Mertens to take command of the engineer works, and Lieutenant-Colonel von Scheliha of the siege artillery. The technical preparations for the siege met with many difficulties; above all, the bringing up of the guns, ammunition, other siege apparatus, and the provisions occupied much time, as the transport by rail, via Mühlhausen, could only be effected as far as Dannemarie, and from the latter place by road through a difficult country. The principal siege train park was north of Chalonvillars on the Paris-Belfort road; another at Moval on the road to Delle.

The next thing was to secure the besieging army towards the south, where the French held a line from the Swiss frontier to Isle sur Doubs; constant fights occurred here, and gradually all the bridges over the Doubs were destroyed by one party or the other. It was above all things necessary for the troops carrying

on the siege to gain ground immediately in front of the fortress ; a task which was rendered very difficult by the behaviour of the garrison ; they made a sortie against Bessoncourt on the 15th of November, with three battalions and six guns, which was repulsed by the Neustadt battalion of landwehr ; the enemy lost three officers and 200 men. On the 23rd of November the combined landwehr regiment, under Colonel Gericke, captured Valdoye and Mont d'Arsot, and that under Lieutenant-Colonel Ostrowsky, seized the strongly-occupied villages of Cravanche and Essert with Mont Salbert, which lies between them. The enemy made repeated attempts to re-capture these, but failed ; similar sorties were made on the 24th of November against the villages of Vezelois and Sevenans, which were repulsed by the Zitzewitz landwehr regiment. The enemy could only be driven step by step out of his advanced positions ; each separate village or wood was the object of a struggle ; the night surprises were generally successful, by which means the villages of Botans, Argiésans, and Bavilliers fell into our hands, and enabled our outposts to be advanced to the eastern slope of the Hauteur du Mont and to the Tuilerie, that is to say, into the neighbourhood of Forts Bellevue and des Barres. From this moment the close investment began ; the outposts, however, still extending for a distance of from 5 to 6 leagues, whilst the cantonments of the main body occupied from 9 to 10. It was necessary, as soon as the besiegers captured the successive positions, to secure them with field works, and maintain the utmost vigilance in patrolling. The headquarters were removed from La Chapelle to Fontaine, and the corps, notwithstanding the dispersed positions it occupied, had also to cover a line of communication for 16 miles (75 English miles) in Alsace.

In consequence of a reconnaissance which had taken place on the 16th of November, it was decided to try the result of a bombardment, as it might, perhaps, influence a capitulation, and also because sufficient matériel for a regular siege had not yet arrived.

To the east of Essert lies a flat-topped ridge, where the batteries for this purpose could be constructed under cover of the advanced troops ; the construction of Batteries Nos. 1, 2, 3, 4, 5, 6, and 7, armed respectively with four 12-pounders, two short 24-pounders, and two 12-pounders, four short 24-pounders, four long 24-pounders, four 12-pounders, four 27-centimetre mortars, and four long 12 pounders was commenced, whilst a demonstration was made on the east side of the fortress by Colonel von Buddenbrock's detachment to engage the attention of the enemy. The construction of the batteries was completed on the night of the 2nd-3rd of December, unperceived by the enemy, notwithstanding the moonlight. When the batteries opened fire at 8 o'clock in the morning, the artillery of the defence replied to them with vigour and without intermission. This cost us a loss of one officer and 10 men killed and 30 wounded ; our projectiles ranged up to the suburbs of Belfort and the neighbourhood of the castle, without, however, doing much damage to the enemy's artillery in their commanding position. The bombardment

reached its height on the 8th and 9th of December, with good results, against the Faubourg de France; the artillery of the garrison had set in flames the villages of Cravanche, Bavilliers, and Essert. In order to draw closer round the fortress, and prepare for the formal attack on the Perches, the besiegers' artillery was extended towards the right flank; for this purpose the outposts on the south side had to be advanced. In the execution of this, on the night of the 14th of December, the Deutsch-Crone battalion seized the wood of Bosmont, which was difficult to penetrate, and had been strengthened by abattis, and the Konitz battalion took the Grand Bois, where they captured an enemy's piquet of one officer and 45 men. On the other hand an attack made in the same night against Danjoutin failed, partly because it was occupied in great strength, and partly because the artillery fire which was to prepare the way for the assault had not been sufficiently effective against the enemy's defences on account of the fog. At the same time the enemy made a sortie against Bavilliers. Our loss was two officers and 79 men; that of the enemy one officer and 80 unwounded prisoners. These circumstances made it possible on the night of the 17th-18th of December to build No. 8 battery for four long 24-pounders to act against Andelnans and Danjoutin; with the same object, Batteries Nos. 8a and 9 were thrown up during the night of the 17th-18th of December, armed respectively with two 12-pounders and four 6-pounders, as well as with two 27-centimetre mortars.

It now became necessary to strengthen the existing artillery positions to the south-west of the fortress, and to place the requisite batteries on well selected points at a nearer range. Their execution, however, had to be postponed partly on account of the continuous rain having cut up the roads, which had never been good, and thus delayed the transport of the guns; and partly on account of the want of troops, who were scarcely sufficient for the works and the duties under arms; further the seven battalions of the 4th reserve division, who were coming to reinforce the Germans, arrived but slowly, and the total of the investing army, including the detachments in the south on the heights of Montbéliard, was only 22 battalions of 800 men each. In the meantime frost had set in, and the arming of the batteries could be proceeded with. Batteries Nos. 10, 11, and 12 were built on the evening of the 24th of December at Bavilliers, the first being armed with four long 24-pounders, and the two latter with four 12-pounders each. They were to fire against the hornwork of l'Esperance, the post of La Ferme and the Perches; then batteries Nos. 13 and 14 were built under great difficulties on account of the ground, and armed each with four long 24-pounders; they were to fire against the Forts Haute-Perche, and La Justice. The batteries Nos. 10, 11, and 12, however, did not open fire until the 28th of December, after they had been connected by trenches with the batteries on the

left at Epert, and on the right with the village of Bavilliers. In the night of the 28th-29th of December batteries Nos. 15, 16, 17, and 18 were begun, the first one armed with four 27-centimetre mortars and the remaining three with four 12-pounders each; they were to open fire on the 7th of January against the village of Danjoutin, still remaining in the possession of the enemy, and against the two Perches. Battery No. 19 was also built at this date; it was originally armed with two 21-centimetre mortars, and later with two 25-centimetre mortars, to throw shells into the town and citadel.

The first news of the approach of a relieving army under the command of General Bourbaki was received on the 25th of December. The situation of the besieging army was not a favourable one. The XIVth corps stood far off at Dijon; the troops of the investment occupied extended positions, whilst the batteries and siege train parks were on the side from which the enemy was approaching. What was going on on the other side of the Doubs behind the enemy's outposts was unknown, as the bridges were blown up and other communications destroyed. As soon, however, as the news was confirmed the siege operations had to be slackened. But the position at Arcey, as well as the section of the Allaine, had to be prepared with field works and occupied in greater strength; four 24-pounders were mounted in the castle of Montbéliard, the bridges over the Allaine prepared for blowing up, and the roads from Isle sur Doubs to Héricourt and Montbéliard blocked.

Between the 29th and 31st of December, the besieging army was reinforced by a detachment from Alsace under command of General von Debschitz, consisting of 3 battalions, 2 squadrons, and 2 batteries, so that the total of the investing army was raised to 30 battalions, 6 squadrons, 6 batteries, 26 companies of artillery (of which 7 were Bavarian, 4 Baden, and 3 Würtemberg) and 6 companies of pioneers (to which Bavaria, Baden, and Würtemberg each contributed 1). The Prussian siege artillery before Belfort consisted of 12 companies from the guard, 4th, 6th, and 7th garrison artillery regiments. The detachment of General von Debschitz occupied the line Audincourt-Vaudoncourt-Croix, where they were in frequent collision with the enemy's outposts; thus, for instance, on the 2nd of January at St. Croix with the Liegnitz battalion, when four French officers and 200 men were driven over the Swiss frontier. At Arcey, also, where Colonel von Bredow was posted with 5 battalions, 2 squadrons, and 2 batteries, the necessary reconnaissances towards Isles sur Doubs led to skirmishes. Under these circumstances the opening of the regular attack, which was now fully prepared, had to be postponed. The construction of batteries continued steadily nevertheless, and when it appeared that the enemy had withdrawn in consequence of the movements of the XIVth corps to its left, and that an attack from the relieving army was no longer imminent, the necessary movements of troops for the intended opening of the formal siege was ordered. As a

preliminary to this, Captain von Manstein, commander of the Schneidemühl landwehr battalion was directed on the night of the 8th January to sieze the village of Danjoutin, which was entrenched and held in force by the enemy. The 5th and 7th companies quitted the wood east of Danjoutin half an hour after midnight and, followed by the 6th and 8th companies, advanced to the attack of the eastern edge of the village. The attack succeeded, and while the 7th and 5th companies pushed the enemy out of the houses and from the barricades in the village, a company of pioneers immediately put them in a state of defence; a company from the 1st and 14th landwehr regiments endeavoured to cut off the enemy on the south-west, whilst the 5th and 8th companies occupied the railway station; so as to be in position to oppose an expected sortie from the Perches, which actually took place soon after, supported by a battery that came into action at Fort Bellevue, and was repulsed. Notwithstanding the excellent and well-executed arrangements, we lost 2 officers and 80 men, and the enemy 3 officers and 65 men, exclusive of 18 officers and 700 men made prisoners. The building of the batteries made but slow progress on account of the frost and the rocky soil. The pioneers assisted in laying out and completing the battery communications at Ravilliers, and afterwards entrenched the village of Danjoutin. Still the formal attack could not be begun, as the relieving army was again approaching.

On the 9th of January, the march of French columns from Courcelles on Arcey was reported. Colonel von Bredow concentrated his detachment there, and exchanged a few shots with the enemy. The French advanced from Seloncourt towards Vaudoncourt and Dasle against the detachment of General von Debschitz, but were repulsed; on the next day a portion of the detachment made an attack on Abéville. On the 10th of January the enemy developed a larger force with guns, opposite to Von Bredow's detachment, but without attacking. General von Werder sent information that he was marching on Belfort; he arrived on the 11th of January, and all the pioneers and a portion of the siege guns were placed at his disposal.

The positions Abéville, Audincourt, Montbéliard, Hericourt, Chagey, Frahier were fortified and provided with emplacements for guns of position, which afterwards had an important influence on the successful issue of the battle. The bridges over the Lisaine, at Busurel, and others as far as Delle were blown up, and the passage of the Ballon d'Alsac to the north of Giromagny destroyed by Nagle's Bavarian pioneer company; the bridges lying in the line of retreat had to be restored. Von Bredow's detachment in its advanced position at Arcey had assisted materially in arresting the progress of the enemy, so that the divisions on the march gained time to form up behind the section of the Lisaine.

We must pass over the general description of the battle there. General von Tresckow II. took command of the left wing of the

Prussian position, in addition to that of the investing army. General von Debschitz passed under the immediate command of General von Werder, and had to maintain a series of fights between Doubs and the Swiss frontier. Those troops of the 4th reserve division, which had formed a part of the besieging army, rejoined it. The 1st reserve division, to whom the task of the investment was allotted, had only a small share of the fighting; as, for instance, in the attack on Chenebier, where the fusilier battalion of the 67th regiment, in company with Baden troops, lost 5 officers and 110 men. During the battle the besieging army remained constantly under arms; the garrison only made two small sorties against the west flank. The bombardment of the fortress as well as the construction of the batteries continued steadily.

It was at this time that batteries Nos. 21, 22, 23, 24, and 25 were built to fire on the citadel, Forts la Justice and Miotte, as well as on the hornwork and the main enceinte; they were armed respectively with two smooth-bore and two rifled 21 centimetre mortars, four short French 24-pounders, four long 24-pounders, four long 24-pounders, and five 12-pounders.

After the departure of Bourbaki's army the siege was again carried on with energy. On the night of the 21st of January the ground necessary for the security of the right wing of the first parallel as well as the village of Perouse were occupied. This attack was conducted by Colonel von Zglinicky, commanding the 67th regiment; the 1st and 2nd battalions, the former being in reserve, seized the entrenched woods of Baillis and Taillies at midnight, and a landwehr battalion of the 26th regiment took the wood of Morveaux as well as the redoubt there, all without firing a shot. At Perouse, on the contrary, there was severe hand-to-hand fighting both in the streets and houses, but their possession was maintained regardless of the heavy fire from the two Perches and from Fort Justice. As a means of recognition among the columns the forcible German countersign of "Haut ihn" (strike him) was given. Our casualties on this occasion were 8 officers and 175 men, while the enemy lost 5 officers and 93 men as unwounded prisoners alone. Battery No. 8, armed with four 12-pounders, had been engaged against Perouse ever since the 8th of January. On the evening of the 21st of that month, the first parallel on the line Danjoutin-Perouse against the Perches, together with the communications in rear were completed by a working party of 3,000 men, without any important interruption from the enemy; it was only delayed by the ground being frozen to a depth of  $1\frac{1}{2}$  feet and the rocky nature of the soil. For these reasons the parallels and communications could not be completed to the necessary profile until the 26th of January. The following batteries were built gradually in line with the parallels: No. 26 for four 50-pounder mortars against the Basse-Perche, No. 27 for four 12-pounders against the Haute-Perche, No. 28 for four 60-pounder mortars, and No. 34 for two 6-pounders and two 25-pounder mortars against the Haute-

Perche, and to secure the parallel against sorties. The principal engineer dépôt was in rear of batteries Nos. 15 to 18, on the high road where it quits Daujoutin at the south-east; two other engineer dépôts were behind the railway embankment, at the point where it intersected the approaches. The artillery of the defence were at this period, although not very energetic, still fairly active. The attack on the Perches was rendered difficult both by fire from the castle and Forts la Justice and Miotte as well as by the rocky ground, the parapets on which had in some places to be formed of sand bags. Notwithstanding these difficulties, the second parallel was completed by the 1st of February. At this period, the construction of mortar batteries No. 29 for eight 7-pounder mortars, against the Haute-Perche, and No. 30 against the Basse-Perche for four 7-pounder mortars, No. 31 for six 60-pounders against La Justice and Miotte, and gun batteries Nos. 32 and 33 against La Justice and the town, was taken in hand. The labour was very severe at first on account of the cold, afterwards on account of the water, which in consequence of the sudden thaw and rain filled the trenches in some places to a depth of four feet; as the bottom of the trench could not be constructed level, but had to follow the natural inclination of the ground.

There were many pressing reasons for bringing the siege to a speedy conclusion, and an assault on the two Perches was therefore ordered for the evening of the 26th of January. Five infantry companies, and one of pioneers were told off for this duty. According to the arrangement, three infantry companies were to form the attacking party, one on each flank, the third to advance against the gorge of the works, two companies to remain in support; the pioneers were to blow up the half-sunken block-houses in the ditches at the gorge, remove palisades and cut steps in the counterscarp and parapet; a working party, 2,400 strong, were drawn up in the parallel, ready, in the event of the assault being successful, to continue the trenches up to the Perches as well as to construct the connecting line of entrenchment. Colonel von Zglinicky commanded the whole. The left column against fort Basse Perche pushed forward up to the ditch at a quarter before 7 o'clock in the evening. The pioneers with First-Lieutenant von Richthofen and Lieutenant Kraatz, jumped down and began their work; the infantry columns pressed forward with them, one entered the ditch in front and the other two into the trench-like ditches on either side of the gorge. The commandant in expectation of such an assault had placed two battalions with a working party in reserve in rear of the forts, who, advancing at the right moment, repulsed the attack. The result of the attack by the right column on Haute-Perche was more satisfactory so far, that an undulation of the ground screened it from the defender's view during the greater portion of its advance, but beyond that point it was checked by the heavy fire of the enemy. The assault therefore completely failed. The loss of the right column was small, the left column had 5 officers and 250 unwounded men



taken prisoners, as they were surrounded by a superior French force in the ditches from which they could not escape; there were, besides, 9 officers and 168 men killed and wounded. Both columns were much impeded by wire entanglements, that were formed between the stumps of the trees, where the wood of Perche had been felled. The reconnaissances previously undertaken by engineer officers, Captain Koch of the Caden pioneers and First-Lieutenant von Richthofen (who was taken prisoner in the assault) failed on account of the watchfulness of the French sentries and led therefore to no result.

After the 26th January, news of a fresh movement of a considerable hostile force from Morteau and Hyppolyte, made it necessary to bring the strength of General v. Debschitz's detachment, which had advanced fighting to Blamont and Pont de Roide, up to 7 battalions, 2 squadrons, and 2 batteries. General v. Debschitz encountered masses of unarmed French troops beyond Maiche, who passed over the Swiss frontier. After this detachment, assisted by the 4th reserve division, had cleared the country between the Doubs and the Swiss frontier as far as Pontarlier, it returned. In the meantime the trench work progressed rapidly, partly by flying sap, partly by half double sap, according as the vigilance of the enemy, the energy of his fire, and the weather and time of day permitted. The engineer corps had to lament the loss of First-Lieutenant Müller, who died, and of Captains Koch and von Oidtman, of Lieutenants Adam and Longard, who, with many pioneers, were wounded.

The difficulties of the ground and the disease among the troops increased seriously. There was so much sickness, especially among the technical troops, that it became necessary to order up two additional companies of garrison pioneers from Strasburg for the siege. The gun emplacements Nos. 35 and 36 against the Haute-Perche, having been constructed and armed each with two 6-pounders, opened fire. On the 8th of February the two Perches were successfully captured by surprise. Captain Röse of the engineers, who was on duty with his company in the crowning against the Haute-Perche, noticed that there were no French sentries behind the rampart. He jumped at once into the ditch, climbed the parapet, called on the nearest men at work in the trenches to follow, ordered the covering party, consisting of the Oels and Hirschberg battalions, to advance, and pressed forward into the interior, taking as prisoners 10 of the weak garrison. As soon as First-Lieutenant von Weltzien and Captain Pflaume, both of the engineers, saw what happened, they agreed with Major Brinkmann of the Kirschberg battalion, to make a similar assault on the Basse-Perche, which was captured after a short fight.

On the 19th February, batteries Nos. 37, 38, and 39 opened their fire, the two first against the castle, and the latter against Fort Justice. They were each armed with four long 24-pounders, and their construction, apart from certain interruptions, had occupied a very long time.

In the night of the 9th-10th of February, the connecting works between the captured forts and the lodgment in the interior were completed. Besides shattered gun-carriages, there were found in each fort three partially disabled guns. The artillery officers immediately brought their guns out of the nearest batteries, by a temporary bridge made over the ditch; and opened fire to meet an expected sortie of the enemy. The latter replied with a very heavy cannonade lasting several hours, during which, however, the works in the gorge had to be continued. We lost in consequence 1 officer (Lieutenant v. Steinkeller), 6 men killed, and 33 wounded. On the same evening the commandant demanded an armistice. This was, however, refused, as the commandant requested to hold the fortress until the return of the officer who had been despatched to the French Government for instructions. In the meantime, the following batteries were constructed in the second parallel; No. 40 for four 27-centimetre mortars against the castle, Nos. 41 and 42 for six 60-pounders and four 7-pounder mortars respectively, to fire against the castle and the farm; the former opened fire on the 10th, and the latter on the 11th of February. The heights of the two Perches were now turned into a formidable artillery position for 60 guns placed thus:

- a. On the right of the Haute-Perche, batteries Nos. 39, 38, and 37, armed each with four 24-pounders, and No. 53, for four 24-pounders, against the Citadel and Fort la Justice.
- b. Between the Haute and Basse Perches, batteries Nos. 34a, 43, 44, 45, 46, 47, 48, 49, and 50, armed respectively with four 12-pounders, four 12-pounders, four long 24-pounders, four 50-pounders, and two 27-centimetre mortars, four short 24-pounders, four 12-pounders, four 12-pounders, and four 12-pounders, all to fire against the Citadel.
- c. To the left of the Basse-Perche, batteries Nos. 51, 52, and 36a, armed respectively with four long 24-pounders, four short 24-pounders, and two 6-pounders, to fire on the Citadel, the west front of the town, and Fort des Barres. Finally, battery No. 53, for four long 24-pounders, was constructed south of Perouse, to fire against Fort Miotte.

After calling the attention of the commandant to this imposing artillery array, he was summoned, at 3 p.m. on the 13th of February, to surrender. Just at this time the expected instructions from his government arrived; and the negotiations, which were at once begun with Captain von Schultzen-dorf, of the general staff, led to a preliminary armistice, to give the commandant an opportunity of learning the situation of affairs in France, as well as to enable him to prepare for the capitulation.

There was no interruption in the engineers' works, who pushed out a sap from Basse-Perche against the castle during the night of the 14th of February, and only ceased the advance towards morning.

On the afternoon of the 15th of February, the commandant announced himself prepared to surrender the fortress. The negotiations continued until 4 o'clock in the afternoon of the 16th of February. A convention was concluded by which the commandant of the fortress, Colonel Denfert-Rochereau, was to hand over the town, the forts, and the war matériel, to General von Tresckow II. on the 18th of February at mid-day; the garrison (with the exception of the guards) were to quit the fortress before that hour with all the honours of war, in consideration of their gallant defence. The garrison were marched by two roads, in echelons of 1,000 men, to the department Saone and Loire. 7,000 were marched off on the 17th of February, and 7,500 followed on the 18th. According to the report that was received, the garrison numbered 17,000, of whom 11,500 left the fortress, leaving 2,000 sick behind; the remaining 3,500 were accounted for by deaths, desertion, and as prisoners. The total losses of the besiegers, including those in the open field, were 2,100 men.

On the 18th of February, at 10 o'clock in the morning, the powder magazines and mines were occupied by the German troops; at 12 o'clock they took possession of the gates, and relieved the guards; about 280 guns were captured in the fortress. At 2 o'clock p.m. there was a triumphal entry by the Porte du Vallon. A short religious service was held in the entrenched camp, after which General von Tresckow II. called for cheers for his Majesty the Emperor, and the allied German princes, whilst the Prussian flag was hoisted on the castle and saluted with 101 rounds fired from the captured guns. The town itself, as well as the suburbs, had suffered severely from the bombardment.

After the fulfilment of the conditions of the treaty of peace with France, Belfort was restored to the French.

## APPENDIX.

The foregoing pages contain a short description of the fortress-warfare in front of those places, which, lying on the north and east frontier of France, barred the march of our armies, and show how their reduction was accomplished by operations on a more or less extended scale. According to the title of the book our task would therefore be completed.

But it seems to us desirable to narrate in this appendix as a sequel, those occurrences which relate to the conquest of some small fortified places lying within the zone of operations of the 1st army (the citadel of Amiens and the small fortress Peronne), although neither a special besieging army with the accompanying technical troops, nor regular siege artillery were employed, nor even the special technical preparations for siege operations undertaken. We consider this due to our brave 1st army, that fought so well under most difficult conditions, and, on whose operations, these fortresses had such an important influence. We also wish to add a description of the gallant and successful coup-de-main for the capture of Rocroy.

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*Advance of the 1st Army.*

After the capitulation of Metz, the 1st army, commanded by General of cavalry Freiherr von Manteuffel, consisted of the corps under Lieut.-General von Bentheim, the VIIth corps under Lieut.-General von Zastrow, and the VIIIth corps under Lieut.-General von Goeben, the brigade of General von Senden, and the 3rd cavalry division under General Count von der Groeben.

The first task, a difficult one, that fell to this army was the evacuation of Metz, and the transport to the rear of 150,000 prisoners, also to hold Metz; to besiege Thionville, Longwy, Montmedy, Mezières, and in part Verdun, for the security of our line of communication with Paris and the west, and afterwards to maintain these, whilst advancing against the north-west of France; to overthrow the newly-formed French armies at Lille and Amiens; finally the siege of La Fère had to be undertaken as well. General v. Zastrow, with the VIIth corps and the brigade of General v. Senden (19th and 81st regiments of the 3rd reserve division), had the duty allotted to him of holding Metz, and carrying on the fortress-warfare on the

northern frontier of France, in the manner that we have already described.

Further, the troops before Verdun under General von Gayl had to be reinforced, so that after the detachment had left for La Fère, and the 1st division had been despatched for the investment of Mezières, there remained for operations in the open field only two incomplete army corps and the 3rd cavalry division. On the 7th of November the army began its march to the west of France by two roads. The 1st corps by Briey, Spincourt, Damvillers, Busency, Rethel, Laon, and Noyon; the VIIIth corps, on the left, took the road by Etain, Verdun, Varennes, Reims, Soissons, and Compiègne. The 3rd cavalry division, accompanied by infantry and artillery, was several days' march in advance to clear the Argonne Forest of franc-tireur bands. Afterwards it rejoined the main body and marched in close connexion with it.

Just as the army reached the Meuse, Verdun capitulated, and a very important road junction thus fell into our hands. In this forward movement, the army gave brilliant proofs of its marching capabilities; having in 14 days accomplished a distance of from 33 to 36 miles (155 to 169 English miles), measured in a straight line, or  $2\frac{1}{2}$  ( $11\frac{1}{2}$  English miles) per day. As the route of the 1st corps led within from 2 to 4 (9 to 18 English miles) of the French line of fortresses, it was necessary, in order to cover the flank, that Montmedy and Mezières should be observed or invested, in the manner already described in the history of the sieges of those places.

On the 20th of November, the head of the columns reached the line of the Oise, the right being at Noyon and the left at Compiègne, and it was at this time that the 3rd cavalry division, with artillery and two jäger battalions attached, reported the presence of considerable hostile forces at Amiens under General Faidherbe, and also at Rouen. In order to prevent the junction of these two French armies, the march was continued on the 23rd of November by Montdidier and Noyon, whilst at Le Quesnel and Mezières there were small affairs with the advanced guard.

On the 26th of November, the VIIIth corps ascertained at Thennes, about 2 miles ( $9\frac{1}{2}$  English miles) to the south-east of Amiens, that the enemy was prepared to offer resistance before the latter town with a strong force, and that the necessary dispositions ought to be made to give him battle next day. It should be observed that whilst the VIIIth corps was up to its full strength, the 1st corps consisted of only one (the 3rd) infantry brigade, one cavalry regiment, and the corps artillery; on the following day, however, the 1st division, having been relieved before Mezières by the detachment of General v. Senden, arrived in sufficient time to take a part with its leading troops in the battle, the details of which we must pass over. In consequence of the successful issue of the

engagement the outposts of the VIIIth corps were established within  $\frac{1}{2}$  a mile ( $2\frac{1}{2}$  English miles) of Amiens.

### *Amiens.*

Amiens is a manufacturing, industrial, and open town of 70,000 inhabitants, lying on the river Somme, navigable here for small sea-going ships, and which flows through the city in three branches. The cathedral, built between the years 1220 and 1228, is celebrated as a masterpiece of pure and well-executed French-Gothic architecture. To the north of the town, and on the right bank of the Somme, which is joined half a league to the east by the river Noye, lies the citadel; it was built in the reign of Henry the Fourth, and consists of five regular bastions, with very high profiles, and the usual arrangements. A strong well flanked drawbridge leads from the citadel over the ditch to a second bridge over the Somme, used for the regular traffic of the town. Between the citadel and the town is a sort of esplanade, so that the nearest houses are about 300 paces from the former. The ground in front of the citadel on the right bank of the Somme is quite open, and swept by the guns from the fort.

Amiens is the junction of many important roads and railways; the latter go to Rouen and Boulogne sur Mer, as well as Arras, Tergnier, and Paris. On the approach of the enemy, the bridges over the Somme in the neighbourhood, and also the railroads for a considerable distance, had been destroyed, and the fortification of the town was commenced to secure it from a coup-de-main. Some old entrenchments were restored for this purpose, and armed with guns, whilst barricades were erected on the roads leading to the gates. The suburbs de la Hawboye, de Beauvais, and de Noyon were favourably placed for the defence of the city on account of their advanced position; and also the suburbs de la Maurice and St. Pierre lying on either side of the south front of the citadel. Further in advance, on the south and south-east of the town, shelter-trenches had been carefully constructed in suitable places and gunpits thrown up at skilfully selected points. But the completion of all these well-considered preparations for the defence was prevented by the rapid course of the military operations in the immediate vicinity of the town.

On the morning of the 28th of November, the city was occupied by the 16th division, under Lieutenant-General von Barneckow, having been evacuated during the night by the French garrison, which consisted of three brigades; the citadel remained in possession of the enemy. Under these circumstances, the commandant, Captain Vogel, an Alsatian by birth, was summoned to surrender, but he refused flatly. Nothing remained therefore except to capture it by force of arms. For this purpose some Prussian detachments, led by the mayor of the town, occupied the houses opposite and nearest to the citadel, cutting off all communications with the city, from whence they annoyed the defenders on the ramparts, who replied with artil-

lery and musketry fire. As this led to no result, the citadel was ordered to be bombarded on the 29th of November by the heavy batteries of the 1st and 8th field artillery regiments. The 41st regiment and two squadrons of the Lithuanian dragoons, both under the command of Lieutenant-Colonel von Hüllessen, of the former, were ordered to take part in the expedition. It started at 9 o'clock in the morning from St. Nicolas, three quarters of a mile ( $3\frac{1}{4}$  English miles) south-east of Amiens, with orders to gain the right bank of the Somme; as it was only from that side that the citadel could be bombarded successfully without injury to the town, which was to be spared on account of having surrendered unconditionally. At the same time Lieutenant-Colonel Gregorovins, of the 1st East Prussian field artillery regiment, discovered a position on the town side, from whence he could fire on one front of the citadel. The ground in front of the citadel towards the country was not favourable for the bombardment. There were certainly a few elevated points at a range of from 2,000 to 3,000 paces, but the citadel could not be seen well from them, even on the clearest days, and it would have been impossible to have prevented injury to the town. The difficulty of finding a suitable passage over the Somme, and the lateness of the hour, induced General von Manteuffel to postpone the bombardment, to the 30th of November. Colonel von Kamecke, commanding the 8th artillery brigade, who was entrusted with the conduct of the intended operations, ordered the batteries of the VIIIth corps to take position on the right bank, and those of the Ist corps to take position on the left bank of the Somme. These imposing masses of artillery were still on the march, when the white flag was seen hoisted on the citadel; the batteries, nevertheless, took up the positions that had been ordered. They did not open fire, as the terms of capitulation were concluded by 10 o'clock in the morning; this was no doubt hastened in consequence of the energetic commandant having been wounded on the previous day in the infantry attack on the citadel; his successor soon found himself prepared to hand over the fortress. The basis of the capitulation was that of Sedan.

Before the occupation by detachments of the 44th regiment, the officers of engineers inspected the mines of the place carefully. A considerable quantity of war matériel was captured, 11 officers and 400 men were taken prisoners and 35 guns fell into our hands, all smooth-bores with the exception of two Armstrongs. The defences, that were to have secured the town against assault, and whose construction had been interrupted by the operations in the field, were now taken in hand by the Prussians, and completed, so as to be prepared for all eventualities. On the 14th of December, and a few days before, the greater part of the German garrison quitted the town, partly to make reconnaissance at a distance from Amiens, partly to endeavour to obtain the release of a railway detachment and its covering party of 50 men that had been surprised at Ham; the citadel

only remained occupied by troops. Although the town of Amiens contributed the supplies and services for the Prussian troops and hospitals with the greatest readiness, still in the peculiar position of affairs, it became necessary to announce by proclamation that any act of hostility on the part of an inhabitant, any attack on the citadel by French troops from the town, as well as any occupation of the town by hostile troops, would lead to a bombardment of the city; however, the necessity for carrying out these threats did not arise. The artillery of the citadel had occasion later to fire on some detachments of the enemy, who, advancing from their positions on the north of the fortress had ventured within range; we merely relate this fact as it was the only instance during the campaign in which French troops were fired upon from a French fortress.

### *Péronne.*

The fortress, notwithstanding its small area, belongs to the first class, and is one of those that were kept in a good state of defence. It lies in the Somme in a marshy and unwholesome lowland between Amiens and St. Quentin,  $2\frac{1}{2}$  miles ( $11\frac{1}{2}$  English miles) east of Albert and the same distance south-east of Bapaume, on the roads leading from the latter place to Ham, and from the south to Cambrai.

The fortifications date from different periods, and have therefore a very irregular trace; some of the ramparts are connected with a castle which appears to be very ancient; it is included within the works. The main enceinte is in the form of an long rectangle, in front of it and to the north lies the suburb of de Bretagne, to the south the suburb of Paris, both defended by crownworks. The west side of the fortress consists of four irregular bastioned fronts with small ravelins; the east, on the other hand, consists of an almost straight line of fortification without a single outwork. On the ramparts of the town are four mediæval towers, one of which in 1468 served as a prison for Louis the Eleventh when he fell into the hands of Charles the Bold, whilst at the foot of another Charles the Simple died. Afterwards the town belonged to Burgundy, but was formally ceded to France by Charles the Fifth after the peace of Madrid in 1526. On the 26th of June 1815, the English in their advance on Paris stormed the place at the first rush. The fortress is surrounded by flat-topped ridges which are useful for artillery positions at long range.

The fortress in itself has little strategic value, as it is not capable of a good defence; but its importance in this war was increased as it threatened the movements of the 1st army in rear, and blocked the railway communication of Amiens with the French Northern Railway at Tergnier. From these causes its capture became a matter of necessity, particularly after the battle on the Hallue, when the enemy again attempted to break out of his quadrilateral of fortresses. Lieutenant-General v.



Barneckow received the order to carry out this with 10 battalions, some of them very weak, and eight squadrons of his own and of the 3rd reserve division. The guns available for the attack were 36 field guns of the VIIIth corps and 18 guns of the 3rd reserve division, besides a small park of 12 garrison guns brought from the citadel of Amiens. As, in the course of the bombardment, it became evident that the artillery matériel was insufficient, a portion of the siege train that had been engaged before Mézières was ordered up, but it never came into use, as the railway before Péronne was blocked with traffic.

The peculiar situation of the 1st army made special dispositions necessary, for covering the siege of Péronne, in accordance with which 11 battalions, 4 squadrons, and 24 guns of the 15th division, under the command of Lieutenant-General von Kummer, were advanced towards Arras; on the left at Bucquoy was Lieutenant-General Count von der Gröben with 1 battalion, 12 squadrons, and 6 guns; on the right, at Fins, was Lieutenant-General Prince Albert of Prussia with 3 battalions, 12 squadrons, and 18 guns. Lieutenant-General von Goeben had the chief command over the troops of the investment as well as of the covering forces.

After several unimportant skirmishes with reconnoitring parties from Péronne, the fortress was blockaded on the 27th of December. It appeared that the place could be bombarded best from the heights on the north, west, and east, from which position there were good objects for the batteries to aim at, so as to meet the artillery of the place on favourable terms, without danger of suffering from its fire on account of the nature of the ground. The guns opposite the north front were very well placed for successful practice, as they faced the long side of the fortress. There being no intention of constructing regular batteries with approaches, the guns were placed so as to take advantage of natural cover, or they were protected by epaulments.

On the 28th of December, the batteries on Mont St. Quentin and across the roads leading over the ridge to Cléry and Athies, opened fire, striking not only the fortifications, but also the town. The artillery of the place was restricted to smooth-bores, and therefore unable to cause much damage to the distant Prussian guns. The besiegers only fired at a moderate rate, which in the later period of the bombardment was due to special reasons.

The advance of the French army from the quadrilateral of Arras, Cambrai, Valenciennes, and Douai, supported by Lille, on the 2nd of January 1871, for the relief of the invested and bombarded fortress, was in connexion with the siege operations which were being successfully carried out against Péronne by the Prussians. On the same day the weak brigade of General v. Strubberg repulsed a division of the enemy at Sapignies on the road from Arras to Bapaume, and took five officers and 250 men prisoners, though another division forced back the small Prussian

detachments posted on the railroad. General von Kummer therefore concentrated the 16th division at Bapaume, where it came into serious collision on the 3rd of January, the result causing General Faidherbe to retreat behind his fortresses and relinquish all operations for the relief of Péronne. The enemy took the direction of Arras, followed by the Prussian cavalry; the infantry and artillery returned to Péronne, as it did not seem advisable to renew the fighting on the 4th of January with such reduced forces, and the risk of a scarcity of ammunition. The battle interfered so far with the bombardment of Péronne that the ammunition wagons of the batteries in action before the place were ordered into the field to meet any possible contingencies that might arise from a scarcity during the action; after the enemy had been repulsed, the bombardment was continued with renewed vigour.

On the 9th of January negotiations for a capitulation began, and were concluded during the night of the 10th of January. Various circumstances combined to force the able and energetic commandant, Colonel Garnier, to take such a step; probably the most important one was the repulse of the relieving army after it had advanced within five leagues of the place. The injury done to the town by the Prussian batteries was very considerable; more than 50 houses were in ruins, the church and hospital had become a prey to the flames. Forty-seven garrison guns, and a quantity of war matériel of every kind were captured, and the garrison of 3,000 men, consisting of 750 of the 43rd regiment, and 150 marines, besides moblots and mobiles of the Somme and Pas de Calais, became prisoners of war.

The repairs to the fortifications were immediately taken in hand, and the fortress carefully secured against a coup-de-main, and occupied by a sufficient garrison.

With the capture of Péronne the whole line of the Somme came into possession of the German army, and became an important point of support in their later operations. It may be taken for granted that in future wars the value of Péronne will be as great as in the present, and that the French Government will probably have the old-fashioned fortifications extended and reconstructed.

### *Rocroy.*

The small fortress of Rocroy, situated close to the Belgian frontier, lies at the junction of the roads leading by Givet and Charlemont to Belgium on the north, and to Rethel on the south; it is situated on a hilly plateau in the forest of the Ardennes 1,000 feet high, about 19 miles north-west of Mézières. The town was built in the middle of the forest by Francis the First to protect the frontier of Champagne; in 1643 it was besieged by the Spanish troops from the low countries, and in 1815 it was captured after a short investment by the Prussians under Prince Augustus.

The fortifications, which are simple, consist of a bastioned trace of five sides with dry ditches arranged in their essential points on the principles of Vauban. As the works have a high profile, the masonry could be seen and destroyed from a distance. To prevent this, the ramparts are surrounded by a screen, which in front of the salients of the west bastions, takes the form of a ravelin or lunette, advanced into the glacis, and brings a cross and grazing fire on to the ground in front. The separate works are very well defiladed, both vertically and horizontally. The east and west fronts have each a gate with the usual defences. With the exception of the two principal powder magazines there are no bombproofs for barracks, hospital, or magazines. The armament had been completed during the war to the necessary extent; nearly all the works had been provided with expense magazines, and all other requirements for an artillery defence. There are no large outworks, but two small earthworks in the form of flèches have been constructed in advance of, and connected with the fortress in order to command the road coming from Paris by Rethel and Mézières, and also that from Givet. The immediate neighbourhood affords favourable and elevated positions for gun emplacements, although the ground is much broken.

The 14th division had successfully accomplished its task by the capture of the fortresses of Thionville, Montmédy, Mézières, and Longwy on the northern frontier of France, and there was no intention on the part of the German commanders, of continuing the warfare against the places lying further to the westward; a prolongation of the fortress-war would have entailed a great sacrifice of time and matériel, so that it was abandoned for this as well as other reasons. The division received orders to rejoin the VIIth corps, and to proceed by rail to the south, where General von Werder required a reinforcement for his undertakings against General Bourbaki. A few days' rest were given to the division after the fall of Mézières for concentration and the completion of certain arrangements. If anything, therefore, was to be undertaken against their inconvenient neighbour, the fortress of Rocroy, no time could be lost. It should be remarked, that, although there could be no doubt about the result of a blockade or bombardment of the place, still the loss of time and matériel would have been disproportionate to the value of the fortress. It was resolved, therefore, at once to try and take the town by a coup-de-main, that is to say, to attack it unexpectedly; and this method was adopted because the profiles of the work made the risk of an assault too hazardous. After the fall of Mézières the enemy quite expected that an attack on Rocroy would follow; a bombardment seemed inevitable, but the roads being bad, it was thought that the difficulties of transporting the siege guns would occupy some time.

Mézières capitulated on the 2nd of January 1871, and on the 4th a detachment of 5 battalions, 2 squadrons of hussars and

6 field batteries and a company of pioneers was, by order of General Schuler von Senden, commanding the 14th division, put in motion for Rocroy. The expedition was under the command of Major-General von Woyna II., and arrived before the place on the evening of the same day. The early twilight prevented reconnoitring in front of the fortress, and the garrison were completely surprised by the unexpected appearance of the enemy before the gates, which was a proof of the energy and precision with which the operation was carried out. As soon as the cavalry had cut off all communication between the fortress and the country, the troops took up their position on the investing circle, partly to prevent the garrison from breaking out, and partly to cover the ground from whence the bombardment was to follow. When everything was prepared, at 10 o'clock on the morning of the 5th of January, the commandant was called upon to surrender, which he refused. At half-past 10 o'clock fire was opened. A thick fog interrupted the view, but flames were seen to break out in the town and the bombardment was continued until 5 o'clock in the afternoon. The artillery of the garrison was not idle; it replied vigorously, but without much effect, as the Prussian batteries were screened either by natural cover or hasty entrenchments. It was already in contemplation to give an order to cease firing and assemble the troops, when another attempt was made to induce the commandant to surrender, by pointing out to him the uselessness of protracting the defence, which, as was found out afterwards, the gardes mobiles were anxious to continue.

On the evening of the 5th of January, the place was handed over, the gates being first occupied by two companies. The garrison consisted of about 160 gardes mobiles and 120 men of the artillery of the line and engineers, who had shown themselves particularly active in the defence; 300 of the garrison became prisoners of war; one stand of colours, some arms, provisions, and munitions of war, as well as 72 heavy guns, were captured. Among the prisoners were two Prussians who had been detained as spies. The exertions made by the troops engaged against Rocroy should not be passed over without notice; they were on their legs for 36 hours, notwithstanding the extreme cold, combined with fog and snowstorms.

## SUMMARY OF SIEGES.

The following fortresses fell during the war, thanks to the energy of our highly trained siege artillery in co-operation with the other branches of our army.

- (1.) Without defence : Lützelstein and Montbéliard.
- (2.) After immediate capitulation : Vitry, Laon.
- (3.) After the first bombardment : Lichtenberg, Marsal, and the citadel of Amiens.
- (4.) As the immediate consequence of the loss of a battle in the field : Sedan, with the army of MacMahon.
- (5.) After a long investment : Metz, with the army of Marshal Bazaine.
- (6.) After a long investment and bombardment : Pfalzburg and Paris, with its enclosed army.
- (7.) After repeated bombardments of several days' duration with siege and field artillery : Toul, Neu-Breisach, Soissons, Verdun, La Fère, Montmedy, Mézières, and Péronne.
- (8.) After a bombardment of several days with the opening of a regular siege : Schlettstadt, Thionville, and Longwy.
- (9.) After a bombardment of several weeks and the completion of the regular siege, with the exception of the passage of the ditch and the storming of the breach or interior retrenchments : Strasburg and Belfort.

Bitsch was not surrendered until the conclusion of the peace, after it had been invested during the whole of the war, and bombarded at the commencement.

Rocroy fell by a coup-de-main after a bombardment with field artillery.

The garrisons of Belfort and Bitsch were allowed to leave with military honours in recognition of their gallant defence.

Besides the enormous amount of war matériel taken from the beaten and captured armies, and the matériel, arms, and ammunition, as well as barrack, magazine, and hospital stores, found in the fortresses, 5,300 garrison guns, most of them smooth-bore and some of which were damaged, fell into our hands, while 1,400 officers and 54,700 men, who had formed the garrison of the towns, were led into captivity.

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